The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 692.---Vol. XVIII. LONDON, SATURDAY, NOVEMBER 25, 1848. [Price 6d.

PEMBROKESHIRE.

SALE OF VALUABLE FREEHOLD ESTATES, CONTAINING RICH MINES OF IRONSTONE, AND ANTHRACITE COAL.

MR. H. P. GOODE has been favoured with instructions to OFFER FOR SALE, BY PUBLIC AUCTION, at the RUTZEN HOTEL, NARBERTH, on Thursday, the 21st day of December, 1848, at the hour of One in the afternoon, in Ten Lots (subject to such conditions as will be then and there produced),

THE FOLLOWING

VERY IMPORTANT ESTATES,

Situate in the parish of SAINT ISSELLS, and within the immediate neighbourhood of SAUNDERSFOOT AND TENBY:—

LOT I.—The rich productive FARM of TREBERTH, comprising a farm-house and offices, and 120 A. 1 R. 20 P., or thereabouts, of excellent land, in the occupation of Mr. Benjamin Pugh (now aged about 48), under a lease for his life granted about 40 years ago, at the low yearly rent of £80. The land is full of IRON ORE and COAL of the best quality, excepted out of the lease, and into which a level has already been driven from the sea through the Hean Castle estate. This lot is beautifully situated, and commands splendid views of the picturesque scenery of Hean Castle and Tenby Bay, and is near Saundersfoot Harbour and Railway, and about a mile from the London and Hobbs' Point mail-road.

LOT II.—TWO SMALL TENEMENTS adjoining lot 1, with gardens and three fields, containing together 4 A. 1 R. 9 P., or thereabouts, in the several occupations of Mary Williams and John Rees, as tenants from year to year, at rents amounting to £6 10s. per annum. This lot also possesses rich mines of ironstone and coal.

LOT III.—TWO COTTAGES, with office and land, containing together 23 A. 1 R. 5 P., or thereabouts, in the several occupations of George Phelps, Sarah Morris, and Thomas Thomas, at yearly rents together amounting to £7 4s. per annum.

LOT IV.—FIVE VALUABLE FIELDS adjoining Lots 2 and 3, in the occupation of Isaac Phelps, as tenant from year to year, at the low yearly rent of £2 4s. 6d. This lot is capable of great improvement.

LOT V.—A COTTAGE, GARDEN, and OFFICES, and SEVERAL CLOSES of LAND, containing together 6 A. 1 R. 12 P., or thereabouts, in the occupation of John Davis (aged about 49), under a lease for his life, at the low yearly rent of £4. Also, a close of land in the occupation of Joseph Callen, as a tenant from year to year, at the apportioned yearly rent of £2 10s., and two closes of ground in the occupation of Thomas Cozens, as yearly tenant, at the yearly rent of £1 15s.

LOT VI.—HARRY STUMP FARM, in the occupation of Mary Thomas, with a wood adjoining, containing together 25 A. 0 R. 40 P., or thereabouts, of very rich land, held by her as tenant from year to year, at the low yearly rent of £20, exclusive of the wood, which is in hand. This lot is very rich in minerals, and can be worked by the same engine-power as Lot 1, which it adjoins.

LOT VII.—The very compact and valuable FARM of EROX HILL, with excellent farm buildings, containing by admeasurement 45 A. 3 R. 35 P. or thereabouts, in the occupation of Mr. John Morgan, as tenant from year, at the yearly rent of £36. This farm is beautifully wooded and sheltered, and the views from the grounds are peculiarly pretty.

LOT VIII.—A COTTAGE, GARDEN, and TWO FIELDS adjoining lot 9, in the occupation of Mr. Davies (aged about 50), under a lease for his life, at the low yearly rent of £4.

LOT IX.—KILLAWEN FARM, in the occupation of Mr. George Hughes, as tenant from year to year, at the yearly rent of £40, comprising a capital farm-house and premises, and 56 A. 3 R. 37 P. or thereabouts of very good land, beautifully situated, and well watered. This lode adjoins Bonville's Court; it contains the rich veins of coal and iron now so profitably worked upon that estate, and possesses beautiful sites for villas.

LOT X.—STONE'S CROSS, a very rich productive FARM, containing 20 A. 0 R. 36 P., or thereabouts, in the occupation of Selina Griffiths Lloyd, under a lease for two lives, aged respectively 73 and 59, or thereabouts, at the very low yearly rent of £5 10s. This lot possesses many attractive sites for a villa, and is bounded on the north and west by lot 9, on the east by St. Issell's Glebe, and on the south by the much admired residence called Netherwood.

The above-mentioned estates are all situate near the sea, and are distant from Saundersfoot about 1 mile, from Tenby about 5 miles, from Pembroke and Pembroke-dock about 11, from Narberth about 6, and from Carmarthen about 22.

Few such opportunities for investment as the present have been offered to the public of estates so beautiful in surface and so rich in minerals.

Printed particulars, with lithographic plans, will be ready after the 15th November instant, and may be had at the principal inns in the neighbourhood, or of Messrs. Evans, Powell, and Co., solicitors, Haverfordwest, and Mr. H. P. Goode, land agent and surveyor, Haverfordwest.

*** For a view of the estates apply to Mr. James, Saundersfoot.

Haverfordwest, November 2, 1848.

RHONDDA VALLEY.

TO COAL TRADE CAPITALISTS.—MOST ELIGIBLE INVESTMENT.—WANTED TO DISPOSE OF, a PART, or the WHOLE, of the INTEREST in the GLYN VACH COLLIERY, contiguous to the Taff Vale Railway, at present working a Three-Feet Coal, of excellent quality, and laid out most advantageously for sinking down to the Dinas Old, or Big Rock, Coal, so celebrated for its good qualities, that the Great Western Railway Company have contracted to take 300 tons per day from a neighbouring colliery. The workings are in first-rate order, and at present yielding about 20 tons per day, held under a lease from Sir Thomas Digby Aubrey, Bart., for 40 years—consisting of 295 acres, the principal part of which is to the rise, and enjoying considerable advantages over every other colliery in the valley. The advertiser would have no objection to leave £1000 of the purchase money invested on approved security.—Samples of the coal, and facilities for viewing the colliery, are at all times available on parties applying to the agent, on the premises; and further particulars may be obtained from Edward Bradley, Esq., Cowbridge.

A Fire-Clay, of superior quality, may be worked with the coal. 2

GLASS-WORKS.—TO BE SOLD, OR LET, in one or more lots, in consequence of the partners intending to retire from business, the old-established WINDOW GLASS-WORKS, well known as the

BROAD AND CROWN GLASS-WORKS, NEWCASTLE-ON-TYNE. 3

Consisting of FIVE GLASS-HOUSES, in complete working order, for making crown, sheet, and coloured window glass, with all the necessary appendages for carrying on the manufacture on the most extensive scale; they have a frontage to the River Tyne of upwards of 900 feet, with ample space to extend the works, if needed. There is a railway for the delivery of coals and materials to all parts of the works, and houses for the workmen.

For further particulars, apply to the managers, at the works, or to Mr. G. W. Stable, solicitor, Newcastle-on-Tyne.

ADVANTAGEOUS OPPORTUNITY.

CUBERT SILVER-LEAD MINE, in the parishes of Cubert and Perranzabuloe, in the county of Cornwall.—TO BE SOLD, BY PRIVATE CONTRACT, the ABOVE MINE, with STEAM-ENGINE, of 36-inches cylinder, 16-inches pitwork, and with all other necessary MATERIALS and BUILDINGS. 4

This mine offers a most excellent opportunity for investment, such as is seldom to be found. The engine-shaft is sunk to 7 fathoms below the 35 fathom level, and is expected to intersect the lode in 5 or 6 fathoms further sinking. The levels have been driven for a great length—the lode having been productive throughout, and the prospects being of the most promising description.

The mine is held under lease from John Oats, Esq., the Earl of Falmouth, and Sir R. R. Vyvyan, at 1-16th and 1-18th respectively.

Full particulars as to the state of the mine may be obtained from Capt. Francis Rowe, and from the secretary, Mr. Henry Thomas, 8, George-yard, Lombard-street, London, to whom proposals to treat for the purchase of the mine should be addressed.

Nov. 10, 1848.

GROWA SLATE COMPANY, TREVALGA, COUNTY CORNWALL.

1200 [illegible] or shares, of £5 per part, or share. 5

NOW IN WORK ON THE "COST-BOOK" PRINCIPLE.

This quarry has been worked for many years by Mr. Avery, of Delabole, so well known and eminently successful in the slate trade, which is of itself a guarantee of the value of the property. The lease of that gentleman has, however, expired, and the present proprietors propose a company to give full and greater impetus to the works.

The present lease is for 90 years from Lady-day, 1848, at a yearly rental of £100, without Royalty or dues of any kind.

The character of the slate has been long established throughout the United Kingdom, and on the continent, as being of the most superior decription in every respect, tenacity, durability, colour, singular imperviousness to water, and resistance of atmospheric decomposition. In fact, it is of the first class slate, and shareholders residing in the metropolis, or its vicinity, have an opportunity of witnessing its appearance and effects by examining the roof of Camberwell New Church, the north side of which is covered with this slate, in slabs, with slate rolls, and is scarcely distinguishable from lead; while the south side, which is roofed with Bangor slate, will be found to be very inferior in every respect. The appearance of the one is beautiful in the extreme, while the other is the reverse. The one is also without a fracture of any sort, but the Bangor slate is much split and patched in many places. It is a curious coincidence of circumstances, that the slates of Growa and Bangor should be thus placed in juxta-position, but nothing can be more satisfactory for those who desire to invest in this undertaking than to have such an opportunity of ocular demonstration of the superiority of Growa slate over that of Bangor, which hitherto was supposed to be without rival.

The new church of St. Matthew, in the City-road, is likewise covered with "rags" of this slate.

The inhabitants of Manchester have also an opportunity of seeing the Growa slate. The beautiful church of Worsley, near Manchester, built by the Earl of Ellesmere, being covered with slabs similar to Camberwell Church. The roof of the elegant structure near Frome, Somersetshire, denominated "The Chauntry," is a specimen of this slate, as is also the church of Treckney, near Boston, in Lincolnshire.

All the necessary machinery is on the quarry. It is situated on the cliffs in the parish of Trevalga, within only one mile of the port of Boscastle. Vessels, however, can load at the quarry itself during three-fourths of the year, and requisite apparatus has been adjusted from the cliffs, to many fathoms at sea, to enable vessels to ride quietly while receiving their cargo, and ships of 120 tons have loaded in four hours.

Prospectuses, and every information, may be obtained on application to the offices, No. 97, Threadneedle-street, City.

Contract for Pig-Iron.

DEPARTMENT OF THE STOREKEEPER GENERAL OF THE NAVY, Somerset-place, 23d November, 1848.

THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, do hereby give Notice, that, on Thursday, the 7th Dec. next, at One o'clock, they will be ready to treat with such persons as may be willing to CONTRACT for SUPPLYING her Majesty's Dockyard, at Portsmouth, with

SIXTY TONS OF SOFT MELTING PIG-IRON (Scotch Clyde). 6

A form of the tender may be seen at the said office. No tender will be received after One o'clock on the day of treaty, nor any noticed, unless the party attends, or an agent for him, duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Pig-Iron," and must also be delivered at Somerset-place, accompanied by a letter, signed by a responsible person, engaging to become bound with the person tendering, in the sum of £100, for the due performance of the contract.

Borough of Londonderry.

TOWN SURVEYOR.—WANTED, by the CORPORATION OF DERRY, a TOWN SURVEYOR: he must be thoroughly conversant with masonry and building, be able to draw plans, understand levelling and surveying, and have a general knowledge of earthwork, &c.—Salary, £150 per annum. 7

Application to be made to the Mayor of Derry, on or before 1st December, stating, in detail, qualifications and previous experience.

LONDONDERRY TOWN IMPROVEMENT.

TO CONTRACTORS AND OTHERS.—The CORPORATION OF LONDONDERRY are prepared to RECEIVE TENDERS

For the CONSTRUCTION of a RESERVOIR and TANK, with all necessary works in connection therewith.

For the SUPPLY of a QUANTITY of IRON PIPES, varying from 2 to 10 inches in diameter, with SLIDE COCKS, FIRE PLUGS, BENDS, JUNCTIONS, &c. 8

For the CONSTRUCTION of a system of SEWAGE, embracing a considerable portion of the borough.

Plans, specifications, and particulars, may be seen and had at the office of R. Hassard, Esq., East-Wall, who will give all necessary explanations of the reservoir and tank, on and after the 30th October inst.—All tenders for the same to be sent in before 20th Nov.

Plans of the sewage to be seen on and after the 13th of November.—All tenders to be sent in before the 15th of December.

Of the iron pipes, &c., may be seen, as above, on and after the 2d of November.—All tenders for the same to be sent in before the 11th December, 1848.

The tenders to be addressed to the Mayor of Derry, and must be in conformity with the forms attached to the specifications.

Security will be required for the due performance of the works, and the corporation will not feel themselves bound to accept the lowest tenders.

October 27, 1848.

WANTED TO BORROW,—In one sum, or in sums, not less than £500 each, by the CORPORATION OF LONDONDERRY, TEN THOUSAND POUNDS, to be secured on the rates leviable under the Londonderry Improvement Act. 9

Application to be made to the solicitor of the corporation, S. L. Crawford, Esq., Londonderry, or 37, Blessington-street, Dublin.

ECONOMICAL STEAM-ENGINE—surpassing the Cornish.—CRADDOCK'S PATENT DOUBLE CYLINDER HIGH-PRESSURE EXPANSIVE and CONDENSING ENGINE, alike adapted for MARINE, LOCOMOTIVE, and STATIONARY PURPOSES.

BOILER—Tubular, free from deposit, and perfectly safe from explosion.

ENGINE—Not half the weight or bulk of ordinary engines.

FUEL—Under 3 lbs. of coal per horse-power per hour. 10

WATER—Under 1 gallon per horse-power per day of 10 hours, for all purposes, with air as the medium of condensation.

These engines are erected at a comparatively trifling expense, and are easily worked.

FOR SALE.

TWO 40-horse power ENGINES,	suited to CONDENSE	either by air or water.		
TWO 20-horse ditto	ditto	ditto	ditto.	
ONE 10-horse ditto	ditto	ditto	ditto.	

N.B.—The 10-horse is adapted to drive, warm, and ventilate a factory.

A PAIR of OSCILLATING MARINE ENGINES, of 10-horse power.

PRICE.—The patentee is desirous of placing some of his engines in good hands, and would accept an extremely low price from respectable parties for the above engines.

The above invention has been known through the scientific press since the date of the first patent, in 1840, since which much thought and capital have been employed in simplifying the practical details. It is now a most simple, efficient, and economical invention, as the engines above offered for sale will practically demonstrate.

For a clear elucidation of the principles, economy, and practical details of this invention, see *Craddock's Lectures on the Steam-Engine*, &c., sold by Simpkin, Marshall, & Co., London, and all booksellers, price 7s. 6d., including 10 drawings.—See also *Mining Journal*, Sept. 16, 1847; *Mechanics' Magazine*, Nos. 1251 to 1254, and 1258; *Midland Counties Herald*, Sept. 30, 1847; *Railway Gazette*, Oct. 2, 1847; *Manchester and Salford Advertiser*, Oct. 2, 1847; *Nautical Standard*, Nov. 20, 1847; *Literary Gazette*, Jan. 8, 1848; *Practical Mechanics' Journal*, of May, June, and August, 1848.

Apply to Thomas Craddock and Co., 36 and 38, Broad-street, Birmingham, where engines on the above principle may be seen at work.

Also ON SALE, THREE 4-horse high-pressure ENGINES—simply arranged and well got up.—Price, £12 per horse-power.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG. 11

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages, and ship cargo apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street Southampton.

NOTICE TO SHIPPERS OF GOODS AND PARCELS, per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS, to INDIA and CHINA.—GOODS and PARCELS sent direct to the company's parcel office, on or before 6 P.M., on the 17th of each month, are forwarded at less cost to shippers than when sent through any intermediate channel. Cases must not exceed 112 lbs. weight each, for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India or China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month.

Detailed particulars can be obtained on personal application, or by writing. 12

Parcel Department, 122, Leadenhall-street.

TELEOMETER.—An easy method of converting a common telescope into an instrument for measuring distances (as this name implies) has been discovered by Mr. YATES, of WHITTINGTON, near OSWESTRY, by which a survey of from 100 to 200 yards, according to the powers of the telescope, may be ascertained with accuracy, and the readiest facility, in about one or two minutes, whether the object be inaccessible by the intervention of an impassable river or other obstacle. Communication of the principle, and instructions to persons desirous of the acquisition, may be had from the inventor, for a reasonable remuneration. As simplicity is the perfection of art, this discovery has the advantage of being totally unembarrassed with any complexity. 13

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £4 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, 14

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

PATENT GALVANISED IRON AND WIRE ROPE WORKS

MILLWALL, POPLAR

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations for mining and railway purposes, and for ships' standing rigging. 15

TO COAL AND IRONMASTERS.—A COLLIERY VIEWER, of middle age, good experience, both in coal and iron mines, and with undeniable recommendations for steadiness, is in WANT of a SITUATION, either in England or Wales.—Communications, addressed "W. R.," care of the Editor of the *Mining Journal*, 26, Fleet-street, London, will be immediately attended to. 16

WANTED,—A SECOND-HAND LOCOMOTIVE ENGINE, with 12-inch cylinder, stroke from 18 to 20 inches.—Also, a 14-inch ditto, stroke from 18 to 20 inches. They must be good strong engines, and in good repair.—Letters addressed "O. P.," Post-office, Bristol. 17

A SECOND-HAND CONDENSING STEAM-ENGINE ON SALE. Will be sold cheap.—Apply to Mr. S. Mills, broker, Sunderland. 18

FOR SALE, BY PRIVATE CONTRACT—A single-acting PUMPING-ENGINE—cylinder 30-inch diameter, 9-feet stroke, equal beam, with 7-ton boiler, cisterns, spring beam, and first set of rod-shafts attached, being the engine of Wheal St. Cleer.—For particulars, apply to Capt. Osborne, Liskeard; Mr. West, engineer, St. Blazey; or Mr. Rendle, the purser, 13, Octagon, Plymouth. 19

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.

Price—£12 to £16; with boiler, £22 per horse. 20

TO IRONMASTERS.—TO BE DISPOSED OF, BY PRIVATE TENDER, a complete BLOWING APPARATUS, consisting of

A BLOWING CYLINDER, 84-inch diameter and 8-feet stroke.

A REGULATING CYLINDER, 108-inch diameter and 8-feet long.

NOZZLES and BLAST-PIPES (24-inch diameter), with holding down bolts and plates—complete. 21

May be inspected at the New Buffery Iron-Works, near Dudley.—Tenders to be addressed to Mr. W. Richardson, engineer, Dudley.

MINING IN AUSTRALIA, NORTH AMERICA, &c.—A GENTLEMAN, of high standing in his locality, who has been for the last 15 or 20 years a large adventurer in the mines of Cornwall—with the nature of which, and with the whole procedure for their working, he is thoroughly acquainted—experienced also in commercial affairs, in which he is competent to undertake a French, Italian, or Spanish correspondence—would be willing to enter upon an ENGAGEMENT to SUPERINTEND a MINING COMPANY in AUSTRALIA, or elsewhere; or to TREAT with any gentleman for the FORMATION of a MINING COMPANY at the former, he himself being ready to bring some capital into such undertaking. As the advertiser will be prepared to tender the highest references in respect of himself, no proposals can be entertained but such as are of first-rate respectability.—Apply per letter (pre-paid), addressed to "A. M. A.," care of the Editor of the *Mining Journal*, 26, Fleet-street, London. 22

Nov. 9, 1848.

MINERAL PROPERTIES AND ESTATES.—Mr. HENRY ENGLISH begs to intimate to the PROPRIETORS of MINES and MINERAL PROPERTIES, as also to ADVENTURERS in MINES, that REPORTS and SURVEYS, with PLANS and SECTIONS, illustrative thereof, will be FURNISHED by him, being aided by agents in the various mining localities, of undoubted practical knowledge and experience. Information or advice rendered on all points touching mining pursuits, which Mr. H. English feels himself competent to afford, as the result of his personal investigation and inquiries during several years of his connection with the several mining districts.—Estimates given for exploring or proving mining ground, as also the machinery requisite, with drawings. 23

OFFICES—No. 25, FLEET-STREET, LONDON.

MINING INVESTMENT.—Mr. R. THOMAS, of No. 8, GEORGE-YARD, LOMBARD-STREET, LONDON (who has had upwards of 20 years' experience as a mining agent in London), having made arrangements to resume PURCHASING and SELLING MINE and OTHER SHARES ON COMMISSION, begs to OFFER his SERVICES to his FRIENDS, CAPITALISTS, and OTHERS, in the TRANSACTION of such BUSINESS. The unprecedented low price of mine shares renders the present a most favourable period for investment, with the prospect of large returns.—The fullest information (without charge) will be given relative to mining operations and investments; and a survey, or inspection, if required, of any mining property will be made by a competent party, on moderate terms. 24

MINING OFFICES—ESTABLISHED FIVE YEARS.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's). 25

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MINING OFFICES, THREE KING'S COURT, LOMBARD STREET, LONDON.—Messrs. R. TREDINNICK & CO. beg to draw the attention of capitalists to the DEPRESSED MARKET VALUE of SHARES in ENGLISH and FOREIGN MINES, many of which pay dividends of from 20 to 30 per cent. per annum, whilst those on the eve of so doing are selling at corresponding low prices.—Messrs T. & Co. continue to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities. 26

MR. JAMES STRIDE, MINING, SHARE, AND GENERAL AGENT, 27, SPRING-GARDENS, LONDON, has FOR SALE, SHARES in the BEST DIVIDEND-PAYING and OTHER MINES. 27

JAMES LANE, MINING SHARE DEALER, 80, *OLD BROAD-STREET, LONDON.* 28

MONEY.—MESSRS. KILLICK & CO. (late WINSTANLEY, KILLICK, & CO.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England. 29

AUSTRALIAN MINING COMPANY.—The board of directors hereby give Notice, that an EXTRAORDINARY GENERAL MEETING of the shareholders in this company will be HELD at the company's offices on Monday, the 11th day of December next, at Twelve o'clock precisely, to receive the directors' report on the present condition and future prospects of the company; at which meeting, also, a motion will be made for admitting votes by proxy at general meetings of the shareholders—whether the form of proxy be that which is prescribed by clause No. 35 of the company's Deed of Settlement, and which being an authority (until revoked) to vote at meetings generally, requires a stamp duty of 30s. (thirty shillings), or such as to limit the authority to a particular meeting, or any adjournment thereof, which latter form of proxy requires only a stamp duty of 2s. 6d. By order of the board, 30

1, Adelaide-place, Nov. 23, 1848. J. A. JOSEPH, Secretary.

BEDFORD UNITED MINES.—Notice is hereby given, that a MEETING of the adventurers of this mine will be HELD at No. 50, Threadneedle-street, on Thursday, the 14th December next, on the general business of the company. By order of the committee of management, 31

Nov. 24, 1848. G. KIECKHOEFER, Secretary.

GADAIR MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the adventurers will be HELD on Thursday, the 30th Nov. inst., at the Queen's Arms Hotel, Cheapside, at the hour of One o'clock precisely, to consider the position of the company, and the nature of the engagement entered into on the mine being acquired, and taking such necessary measures as may seem meet, and on other business. HENRY ENGLISH, Hon. Purser. 32

25, Fleet-street, Nov. 22, 1848.

TIN VALE MINING COMPANY.—Notice is hereby [illegible] that the COMPANY WILL NOT HOLD THEMSELVES RESPONSIBLE [illegible] person for GOODS SUPPLIED to, or DEBTS CONTRACTED by, the MINERS, [illegible] MEN, or OTHER PARTIES CONNECTED with the MINE, except upon a W[illegible] ORDER, SIGNED by the PURSER.—Dated Liskeard, this 8th day of Nov., 18[illegible]

WILLIAM W. MANSELL,

JAMES HOSKINS, Captain.

FOURDRINIER'S PATENT SAFETY APPARATU[illegible]

PREVENTING ACCIDENTS IN MINES AND OTHER PLACES WHEN THE ROPE OR CHAIN BREAKS.

By the ADOPTION of this INVENTION the LIVES of the WORKING [illegible] be PRESERVED, and the PROPERTY of the MINE OWNERS PROTE[illegible] serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom, of th[illegible] rope or chain breaks: in this case the apparatus is *self-acting*.

2. From either the men, or load, being drawn over the pulley [illegible] apparatus is *self-acting*.

3. From the fearful consequences to men or load of a [illegible] the result is equally *certain*.

A COAL PIT, with the SAFETY APPARATUS ATTAC[illegible] at WORK near BURSLEM, in the STAFFORDSHIRE POT[illegible]

To inspect the apparatus, or to obtain [illegible] to Mr. Edward N. Fourdrinier (the pa[illegible] to Mr. Joseph Fourdrinier, 9, C[illegible] to GRANT LICENSES for t[illegible]

DEFECTIVE ORIGINAL.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....	Royal Botanic—Inner Circle, Regent's Park	3½ P.M.
MONDAY	Geographical—3, Waterloo-place	8½ P.M.
	Medical—Bolt-court, Fleet-street	8 P.M.
TUESDAY.....	Medical and Chirurgical—53, Berners-street	8½ P.M.
	Zoological—11, Hanover-square.....	9 P.M.
WEDNESDAY	Society of Arts—Adelphi.....	8 P.M.
	Geological—Somerset-house	8½ P.M.
	Botanical—20, Bedford-street, Covent-garden.....	8 P.M.
THURSDAY	Royal—Somerset-house	8½ P.M.
	Antiquaries—Somerset-house.....	8 P.M.
SATURDAY	Asiatic—5, New Burlington-street.....	2 P.M.
	Westminster Medical—17, Saville-row.....	8 P.M.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY .....Spanish Bondholders—London Tavern, at One.
TUESDAY.....Wheal Fortescue Mining Company—Offices, at Two.
Watermen's Steam-Packet Company—London Coffee-house, at One.
WEDNESDAY..Mutual Life Assurance Company—King's Head Tavern, Poultry, Twelve.
Whitehaven and Furness Railway—offices, at One.
Great Luxembourg Railway—London Tavern, at One.
Continental Cattle Steam-ship Conveyance Co.—George & Vulture, Six.
THURSDAY.....Gadair Mining Company—Queen's Arms Hotel, Cheapside, at One.
Hungerford Market Company—offices, at One.
Medical, Invalid, and General Life Assurance Co.—offices, at One.
FRIDAY..... ..Droitwich Patent Salt Company—King's Head Tavern, Poultry, at Two.

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

BRITISH AMERICAN LAND COMPANY.

A special general court of proprietors of this company was held at the offices, in New Broad-street, on Monday, the 20th inst., to receive a report of the operations during the current year,

ALEXANDER GILLESPIE, Esq. (the Governor), in the chair.

The CHAIRMAN stated that, as this was not the annual general meeting under the charter, the directors had not thought it necessary to prepare any detailed report. The statement prepared by Mr. Galt would explain what had occurred since the last annual report was presented.

The minutes of the last anpual meeting having been confirmed, the CHIEF CLERK read Mr. Galt's report, from which it appeared, that the sales of lands to the 1st Sept., 1848, were 12,776 acres for 8863*l.* 7s. 3d., against 9654 acres for 6331*l.* 11s. 10d. in 1847. The receipts for mortgage debts were 1957*l.* 6s. 6d., against 2381*l.* 11s. 4d., in 1847. This decrease was caused by scarcity of money, cessation of bank discounts, fall of prices of stock, deficient crops, and purchased flour. The estimate of the year's income (5000*l.*) would still be fulfilled; and the sales of land would probably be 20,000 acres. The establishment of the French Canadian Association has been of great benefit in augmenting the sales. A sum of 250*l.* had been advanced upon a grist-mill in Orford. The Government had devoted 20,000*l.* to the opening up of the St. Francis territory, from which the townships of this company would receive great benefit. The emigration to the company's lands, during the past year, had been but trifling. The progress of the St. Lawrence and Atlantic Railway was great; 30 miles will be open *this month*, which brings the communication to within 15 miles of the company's lands at Acton. The prospect of aid from the colonial Government is highly favourable, which will enable the road to be in working order to Sherbrooke in 18 months, when a new era of prosperity to this company will commence.

The CHAIRMAN said, he did not know that he could add much to that report, except to state that their later advices from Mr. Galt held out the same prospects of advantage from the French Canadian Association as he had previously anticipated. They would also perceive that the progress of the railway was satistactory, and, probably, by that time, or very soon after, it would be opened to St. Hyacinth (30 miles). Whilst on this subject, he would just mention that Mr. Robert Gillespie, a relative of his, had lately returned from Canada, where he had collected some very important information. (Hear, hear.) He thought it a matter of congratulation, that they had been able to get rid of the large tract of country in the St. Francis territory, which caused a heavy debt to be hanging over the company, and, more particularly, as it had been ascertained that 75,000 acres of it was quite unfit for cultivation. It had been before announced to them, that on or before the 10th July, it would be necessary to make a call of 2*l.* per share, in consequence of the debt owing to the bankers; but the directors were aware, that a call would not be very agreeable to their proprietary, and had postponed it as long as possible, which had, perhaps, caused some surprise, if not much disappointment. (Laughter.) The advance from the bankers was 9000*l.*, and they had heard, from Mr. Galt's letter, that the future calls to be made on the railway capital will amount to 12,000*l.*, to be met in the early part of the ensuing year. It was with the view of paying off this debt to the bankers, that the directors wished to make the call; and he could only say, that it would be impossible to put it off much longer, but the shareholders might rely, that the directors would not make it at an earlier period than circumstances would compel them to do.

ROBERT GILLESPIE, Esq., gave an account of the result of his inspection of the company's territory, and of the railway. He had witnessed with much pleasure the large emigration of French Canadians into their townships. In passing over the St. Lawrence and Atlantic Railway, he found the works and buildings erected in the most substantial manner; and as to the rails, he had not seen them better laid down in this country. He had also inspected the bridge over the Richelieu, which was a very extensive work, and well constructed. The distance between St. Hyacinth, to which the line had been made, and the company's lands was only 15 miles, thence to Melbourne 40 miles, and to Sherbrooke 25 more. The distance from their lands now was but trifling, and as soon as the line was extended to Sherbrooke, he was satisfied that it would turn out a very profitable investment—not only as a railway, but to the proprietors of this company, by increasing the value of their property. The quantity of firewood alone to be conveyed would form a large item of revenue, independent of the other resources of the province at large; its value would not be confined to Canada east, but would extend to the United States, by bringing the produce of the lakes direct to New York by canal or railway. He had the greatest wish to see this railway complete, and urged the shareholders to use every exertion for that purpose, as he hoped and trusted that the Legislature of the province would not be backward in lending its aid for the same purpose. (Hear, hear.)

Mr. ANDERTON moved a vote of thanks to Mr. R. Gillespie for his valuable information, which was seconded by Mr. WHITE, and passed unanimously.—Mr. POYNDER (a director) expressed the thanks of the directors also for the communication made by Mr. Gillespie.

Mr. WHITE was sorry to hear that the emigration to their lands had been so trifling during the year, whilst it had increased so much in other districts; he thought the reason was probably that the directors did not offer terms sufficiently liberal to the emigrants.

The GOVERNOR stated, that they were much too liberal in this respect on former occasions, which necessitated them to call more frequently on the proprietors. It was not the wish of the directors to aid such persons go out as would be likely to become chargeable to Quebec, or to them- of which they had had sad experience already. If, as was said by the sioner (Mr. Galt), industrious persons only got out to the town- y might be safely left to their own resources. (Hear, hear.) of the emigrants hitherto had gone to other districts, instead of ny's; and, in most cases, it was found to arise from their hav- or relations already located there, who gave glowing descrip- others at home.

MMINS (the deputy governor) was by no means willing to alienate s too hastily, more particularly now as the railway was within of their territory; and, on its completion to Sherbrooke, the value would be so vastly increased.

on of Mr. CLARKE, seconded by Mr. ANDERTON, a vote of d to chairman and directors, when the meeting adjourned.

EMBER OF THE SOCIETY OF FRIENDS CURED OF A COUGH LOWAY'S OINTMENT AND PILLS.—Extract of a letter from Mr. B. loway, dated Creenagh, near Loughgall, September 11, 1848:— it only an act of justice to thyself to state that I have personally by excellent pills and ointment in the cure of an inveterate ted me for three years, to such an extent that I was obliged of suffocation if I went to bed. I then tried the have perfectly cured me."—Sold by all at Professor Holloway's establish-

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On the Winning and Working of Collieries.

BY MATTHIAS DUNN, MINING ENGINEER.

[No. XXI.—*Continued from the Mining Journal of the 18th November.*]

SAFETY-LAMPS.

"When the quantity of inflammable air diminished, the flame became limited to the wick, and was gradually extinguished. When the coal-gas was from one to four or five, the flame of the wick never appeared in any part of the experiment. I have found that a red-hot wire of less than 1-13th of an inch, does not explode mixtures of coal-gas and air. The light of the lamp is much increased by hanging within the cylinder a cage of platina or iron wire, which becomes ignited by the flame. When the fire-damp has reached its explosive point, the cylinder will be filled with flame, but the flame of the wick will appear within the flame of the fire-damp. As the inflammable gas increases in quantity, the flame of the lamp will disappear within the flame of the fire-damp. As the inflammable gas increases in quantity amounting to one-third, the flame of the lamp will disappear, and the flame of the cylinder become paler; this ought to be the signal to leave the place, as the air is no longer fit to respire. I found the sparks from flint and steel full red, and without scintillation in a mixture of coal-gas in which a cylinder lamp had burnt out, and they appeared equally dull and red in a mixture of three of common air and one of coal-gas. I have found that the apertures may be pushed to 900 in a square inch, and that the wire may be 1-70th of an inch in thickness; the larger the apertures, the greater the heat and more brilliant the flame. Of the six specimens collected from the blower at Hebburn Colliery, the purest contained 1-15th only of atmospheric air; the weight of the purest specimen for 100 cubic inches was 19·5 grains. One measure of it required for its combustion by the electric spark two measures of oxygen, and they formed nearly one of carbonic acid. It consists of four proportions of hydrogen—weight 4; and of one proportion of charcoal—weight 11·5. When one part of fire-damp was mixed with under four parts of air, it burnt but did not explode; the mixture of one of gas with from four to eight grew gradually more explosive, and attended with noise: 1 of gas, with 10, 11, 12, 13, and 14 of air, the candle burnt with enlarged flame but without exploding; but a gradually diminishing ratio was produced, as fas as 30 of air to 1 of gas."

The most explosive mixture seemed to be, one to seven or eight of air.

"An iron rod, at the highest degree of red heat, and at the common degree of white heat, did not inflame explosive mixtures; but in brilliant combustion, it produced the effect of one of carbonic acid gas to seven of an explosive mixture deprived of its power of explosion. The principle of the lamp then is, that the flame, by being supplied with only a limited quantity of air, should produce such a quantity of azote and carbonic acid gas, as to prevent the explosion of the fire-damp, and which, from the nature of its operations, should be rendered unable to communicate any explosion to the outer air. I found that flame would not pass through a canal 1-70th of an inch in diameter, when it was ¼ of an inch long, and that a cylinder of ¼ of an inch in circumference, and the number of apertures 100 in a square inch, is safe when their depth is equal to their diameter."

During the year 1816, several improvements were made by Sir H. Davy in his original lamp—viz.: false tops to the wire-gauze; shields to prevent the effects of violent currents; double gauzes, &c. According to Sir H. Davy, the relative power of lights in mines is as follows:—Miner's candle, 43·5; lamp with tin-plate and reflector, 49; single common lamp, 39; double copper wire lamp, 25; steel mill, greatest intensity of light, 25.

Additional Remarks in 1816.—The wire-gauze should not be more than 1-20th of an inch square, as the fire-damp is not inflamed by ignited wire: wire from 1-40th to 1-60th of an inch is the most convenient size. Iron wire is to be preferred to brass, as it will neither melt nor burn, and the coat of black rust which soon forms upon it superficially defends it from the action of the air. When cylindrical, they should be made nearly 2 inches in diameter, with a double top fixed at the distance of ½ or ¾ of an inch above the outer top. Joinings in the lamp should be made with hard solder. Lamps to be constructed to lock fast.

After the completion of his experiments, he sufficiently satisfied his mind as to transmit a set of lamps down to the north, the first of which I had the honour of trying in some of the most inflammable parts of Hebburn Colliery, on the 1st January, 1816. Since that period, they have been used in the most extensive manner and in the most dangerous situations conceivable. It is somewhat remarkable, that notwithstanding the rooted aversion which the working classes have to all new inventions, particularly where there is an appearance of trenching upon their interests, yet the utility and safety of these lamps seemed to them so self-evident, that not the slightest objection has ever been made to their use, except in their deficiency of light. It is impossible adequately to describe the incalculable advantages belonging to this little machine; suffice it to say, that persons in the habit of daily trusting their lives to its security, possess the most perfect dependance on its protection, and instead of ceasing to admire as its novelty fades, astonishment seems to increase; for who can cease to wonder, when he sees himself wading with perfect safety through an atmosphere of inflammable air, where he is only separated from inevitable destruction by the intervention of a bit of "simple wire gauze."

The operation of trying the candle in places suspected of containing inflammable gas is both tedious and dangerous, as gas may be concealed in the cavities of the roof, and other parts sheltered from the ventilation, whereas the Davy lamp may be thrust up into those places with perfect safety and great dispatch, when it would perhaps be improper even to try a candle in that vicinity.

Sir H. Davy has already explained the appearance of the lamps in various mixtures, but I cannot refrain from describing its appearance under some extreme cases where I have seen it at work—viz.: the upper part of the lamp becomes quite red, a continued rushing noise and crackling of the gauze is heard, and the smoke and smell emitted from the lamp show the immense combustion that is going on. It is in this stage that either the movement of the lamp, or the exposure to a current of air, would be attended with extreme danger. I have known the working parts of a pit to be frequently in this dreadful situation, and yet no objection was made to the use of the Davy lamp; but later experience has shown that in the event of the least indiscretion or accident, the consequence would be of the most destructive description. From the continued practical observation of the flame of these lamps, under the various stages of imflammability, a pretty good judgment may be formed of the quality of the surrounding air, by adjusting the wick, and observing the nature of the vapour upon it.

The advantage of the safety-lamp in a pecuniary point of view is also incalculable, as great extents of wastes in many of the most valuable collieries were lying under the influence of creeps, whereby the pillars, constituting two-thirds or three-quarters of the entire mine, were more or less enveloped in explosive gas. In the opening out of these pillars for successive working, the naked candle could not be made use of, and the expense attendant upon steel-mills was so great, that the coal, without some substitute, might be considered irrecoverably lost. The invention, therefore, of the safety-lamp gave a sudden and unexpected impulse to the re-opening of the wastes of many valuable collieries, affording a source of wealth to the owner and occupier, whilst it has been the means of bringing to market an immense national property otherwise lost.

It has already been observed, that a lamp was, simultaneously with that of Sir H. Davy, invented by Mr. George Stephenson, the principle of which was, the introduction of the air by means of perforated brass or copper, the body of the lamp consisting of glass. However ingenious this lamp might be, it has never procured extensive adoption; for, independent of the glass of which it is constructed, the manner in which it draws in its supply of air from the bottom is both contrary to, and deficient in principle, compared with those of Clanny and Davy.

[To be continued in next week's Journal.]

SCIENTIFIC ECONOMY.—In the ironworks of Ystalyfera, where the iron is smelted by the use of anthracite coal, advantage has been taken, in a most ingenious manner, of an observation that the gases which are evolved from the furnaces escape at a temperature which is about the melting point of brass. By an arrangement, which is in its character exceedingly simple, the hot gas is led off into another channel, by means of a strong current generated through a chamber and air-way, from a point just below the top of the iron furnace. It is conducted (with very little heat lost in the passage), under the boiler of a steam-engine; and it is found to be at a sufficiently high temperature to heat the boiler without the consumption of any fuel whatever. Hence an immense saving is effected. Although only one furnace and one boiler has hitherto been adapted to this purpose, it is found to effect a saving of 350*l.* a year. We may consequently expect that, when the experiment is further extended, and more of the furnaces so arranged, that this heat may be economised, and employed for the numerous useful purposes to which it is applicable in a large establishment, the saving will amount to many thousands annually. The communication by Mr. Palmer Budd, at the British Association, in Swansea, this year, is to be printed entire in their *Transactions*.

THE IRON MANUFACTURE OF SOUTH WALES.

[Concluded from last week's Mining Journal.]

It is due to the ironmasters of Merthyr to state that theirs is the only district in which, under some form or other, the truck system has not recently prevailed. The workpeople are regularly paid in cash, and the masters derive no direct profit from their expenditure. This praise, and it is considerable, is nearly confined to Merthyr and Dowlais. In parts of the district between Dowlais and Pontypool, the truck system, in its worst form, still exists. The payments, made in cash to avoid the law, are delivered in a shop in which the masters are directly interested, and at which the men are obliged, on pain of dismissal, to purchase. It is remarkable that the Merthyr districts have been particularly free from chartist outbreaks. The practice of paying labourers in public-houses is still common everywhere, and it is difficult to avoid it, since much of the labour is let out to small contractors, who find their advantage in paying their men in such places.

Any notice of the Welsh iron manufacture would be very incomplete that passed over in silence the character of the very peculiar people by and among whom that manufacture is carried on. The Welsh minerals have been worked only in times so recent, that we do not find any of those old feudal customs and restrictions that prevail in the lead-works and stanneries of the north of England and Cornwall. In their stead, however, is found a very interesting admixture of native Celtic customs with those of a modern manufacture. English manufacturing towns, such as Manchester or Birmingham, are a mere collection of warehouses and shops, standing in a plain country, upon a well-behaved sluggish river, and possessing little interest beyond what they derive from the immense importance of their commerce. Mr. Whittaker, indeed, speaks of an uncommonly lively tradition, remaining in a street in Manchester, but even Dryasdust confesses this to be rare. Such towns boast but few peculiar customs or marks of remote antiquity, foster no peculiar language, and are inhabited by a business-like matter-of-fact race of men. In manufacturing Wales there is nothing of all this. A town, in population exceeding some English cities, stands on the brink of a furious torrent, and is surrounded on all sides by mountains so close, that a walk of an hour will extend from the crowded market-place to their wildest recesses. The Englishman, though proud of his national character, and the high position of his country, has that indifference to national ancestry that belongs to a people of mixed descent, occupying a land colonised originally by no progenitors of his own, and whose more striking peculiarities of character have been gradually worn down and rounded off by the attrition of civilisation. The Welshman, on the contrary, is proud personally of his pure national descent, and of the ancient prowess of his race. The cairns and tumuli even of the English plains contain the bones of his forefathers; the mounds and earth-works that still crown many an English mountain, are trophies of their military spirit; and after an expulsion of more centuries than history can number, he still regards the temples of Stonehenge and Abury as the primitive seats of their religious worship. The tales and romances, familiar to every Welshman from his infancy, were familiar to the infancy of his ancestors when the world itself was young, and have been adopted and interwoven into the fundamental literature of every later nation. The great features of Europe, even to the Asiatic border, the mountain, the strath, and the river, the Alp, the Apennine, the Douro, the Thames, and even the Tiber, are called by names unmeaning to the ears of their present, as to many a past race of their inhabitants or masters, and significant only in the Celtic tongue.

The Cambrian vocabulary, though in terms of art and civilisation less richly found than the compounded dialects of the Saxon, is copious in the language of poetry and of the heart, and rivals in antiquity the remotest tongues of the east. The Celt is the opposite to the Saxon, the Welshman to the Englishman, both in his virtues and his faults. A Celtic bard attributes to the Saxon, "coolness, boldness, industry;" to the Cambrian, "genius, generosity, mirth." To these may be added a hot but placable temper, sterling honesty, gratitude, a strong love of music, a mind little capable of consecutive reasoning or mechanical contrivance. The history of the race is the biography of the individual. They colonised half Europe, but had not skill to retain it, and their spoils added much to the romantic literature and little to the laws of the conquerers.

The Welsh are naturally a very religious people. Merthyr contains a large proportion of places of voluntary worship, set up from no love of dissent, but because the established church then cared nothing for the people. Their religious services, especially their funerals, are of a very impressive character. There is neither hearse nor hired mourner. The corpse is borne and followed by the relatives and friends in the holiday garb of their people, frequently with an additional escort of many hundreds of kindly strangers.

At Llandaff, the church upon the mead of the Taff, where the mountains sink down into the vale of Glamorgan, and where old Siluria, yet unscarred by works, is still, as its etymology is said to express, "a region pleasant to look upon," it is a striking sight to witness a native funeral winding down the hill towards the old ruined cathedral, supposed, with some show of reason, to be one of the earliest Christian churches in Britain. At the occasional rests of the bier, the attendants all join in one of their wild native hymns, preparatory to the commencement of the more calm, but not less affecting, office of the English rital over the body; there, in the Welsh phrase, to rest, "earth upon him, upon us his memory, until God shall manifest his presence, and the house of earth shall uplift itself above all."

The vale of Taff was necessarily the scene of many of the great transactions of war, as it now is of those of peace, between England and South Wales, and the pass and fortress of Castel-Cöch form the boundary and key between the country of the mountain and the plain. From hence, in the words of a yet extant triad, may be seen the length and breadth of "that beautiful country, the land of the courteous and gentle people, where the wives are honoured and the walls white." Up this Pass sped that Saxon band, who, fearing not God, nor regarding man, placed the celestial crown of martyrdom upon the temples of the maid of royal birth. Here stood Aneurin of the flowing eulogy, chief of bards, and poured forth his animating strains, while his half-clad and ill-armed countrymen waged bloody but unsuccessful war against the iron-clad bands of the invader. Down this Pass, also, in still later days, the Welsh Glendower descended upon the plain of Cardiff, and half revenged, by his rapid fury, the long-inflicted sorrows of his race.

But the plough and the harrow have now done their work, and seed-time and harvest have succeeded in their turn. The flood of war has long since ebbed away, and the stream of commerce now occupies the Pass, and rolls its fertillising waters to many a distant shore. Trade, a mightier enchanter than Merlin, whose deeds surpass the prophecies of Aneurin, and are more incredible than the wildest fictions of the Mabinogion, has spread her ægis over the land. The small village has become a populous city, and the barren mountain a nursing mother to many thousand inhabitants. Peace, prosperity, a mild Government, and the free exercise of their language, customs, and faith, have fallen to the lot of the native Welshmen, and have verified the long cherished prophecy of Taliesin:—

"Still shall they chaunt their Maker's praise,
Still hold their language and their lay
But nought of all their old domain,
Save Wallia's rude and mountain reign."

GREAT WESTERN DOCKS, PLYMOUTH.—These docks are progressing very rapidly. Between 400 and 500 men are employed, and the work is continued night and day, as the tide suits, so that no time is lost. Works are being carried on in different parts of the bay; some of the men being engaged in the cofferdam, laying the sea wall; others moving the ponderous machines on the railway, laid for facilitating the transit of the immense blocks of stone; others, again, are employed in forming the embankment between the inner and the outer wall of the docks. There are two steam-engines (one at each end of the works), for pumping the water from the dams, &c. The principle work now in operation is the south dock wall, on the Plymouth side, a considerable portion of which is carried up to its proper level. This wall is built with limestone, of very large size, from the neighbouring quarries, and it has a most substantial appearance. In the middle of the bay, near the reef of rocks, an immense timber stage has been erected, and the dock wall on this part will be supported on piles. There is in this place a channel of mud, about 250 feet wide, and 46 feet deep, lying between the strata of limestone and that of the slate. The western boundary of the channel is composed of the latter material. By the repeated blasts of gunpowder, the reef of rocks is fast disappearing. On the Stonehouse side a steam-engine has just been set to work, to pump the water from a movable cofferdam, so that the men will shortly be at work on the wall on both sides of the bay; and it is probable that the south wall for the docks will be finished about Midsummer next. In order to accommodate the shipping frequenting this part of the harbour, when the inner part is closed against vessels, the area between the docks and the pier is being cleared. The whole area that will be occupied by the docks is about 13 acres. When completed it will accommodate the largest of the Oriental and Peninsular Company's steamers. There will also be a graving dock sufficiently capacious to hold one of the largest steamers.

DEFECTIVE ORIGINAL.

IMPROVEMENTS IN MANUFACTURING TUBES.

[Specification of patent granted to William Taylor, of Birmingham, mechanist, for an improved mode of turning up, or bending, flat plates of malleable metals, or mixture of metals, by aid of machinery, into the form of tubes.]

This invention is thus described by the patentee:—The flat plates of metal, which, according to my said improved mode are to be turned up, or bended by aid of machinery into the form of tubes, are to be prepared by rolling the metal in the usual manner into long, flat, narrow plates, of suitable length, breadth, and thickness, for the intended tubes. The two edges of each such plate being either what is termed feather-edged, suitable for overlapping at the junction of the two edges when the plate is turned, or else the said two edges being of the full thickness of the plate, suitably for meeting edge to edge at their junction when the plate is turned up, according as the intended tubes are to be what are called lap-jointed tubes, or butt-jointed tubes. The said edges, of the plates being duly formed as aforesaid, either by the operation of rolling, or else by subsequent dressing or cutting the said edges, so as in either case to render them as truly straight and parallel as may be requisite for the tubes intended to be made—all which, being the same as usually practised in the making of tubes of malleable metal, does not require further description; and it is to be understood, that the flat plates, which are to be turned up by my improved mode, are to be prepared for being turned up in the same manner as they would be prepared for being turned up by any of the usual modes of performing such operation; and, according to my said improved mode, the flat plate of metal is to be laid flatways upon a long narrow bed of iron, which has a semi-cylindrical concave groove, formed in its upper surface, along the middle of its breadth, and extending all its length from end to end—the concavity of the groove being of a proper size for the exterior of that form of a tube, into which the flat plate is intended to be turned up. The said groove-bed is fastened on a sliding carriage, which is fitted upon, and between, the straight edges of the fixed framework of the machinery, so as to be capable of being moved endways in the direction of its length, with a slow and steady motion, by action and power of the machinery; and, in such motion, the flat plate, which is laid upon the said bed, over the concavity of the aforesaid groove therein, will be carried along with the bed, in order that the plate may be passed endways forward, beneath different operative parts of the machinery by which the turning up is to be performed, at progressive stages of bending or turning up, by the said operative parts in succession, from the state of a flat plate first, to the form of a shallow gutter, and then to a deeper gutter; the sides of which are afterwards turned inwards and then downwards, so as to be ultimately closed together around a mandril, into the intended form of a cylindrical tube.

That one of the said operative parts of the machinery, beneath which the foremost end of the flat plate is first carried in the course of its onward motion, along with the moving bed, is a revolving convex roller, which is adapted for bearing upon and bending the middle part of the width of the plate into part of the depth of the aforesaid concave groove in the bed, which groove is beneath the middle of the width of the plate; and by such partial bending down of the middle part, the two borders of the plate become turned upwards from their original horizontal position, into angular directions thereto, giving the foremost end of the plate the form of a shallow trough, or concave gutter, at so much of the foremost end of the plate as may have arrived at, or may have passed beneath, the said convex roller. And the next one of the aforesaid operative parts of the machinery, beneath which the foremost end of the flat plate will be carried, in the further progress of the same onward motion, is another revolving convex roller, similar to the former, but adapted for a further and complete bending down of the middle part of the already partially bended plate, into the whole depth of the concave groove aforesaid, so that the said middle part will assume the semi-cylindrical form of the concavity of the groove, which, as already stated, is the proper size for the exterior of the intended tube, and such bending will cause the aforesaid two borders of the plate to become turned farther up, nearly into parallel vertical planes at each side of the roller, thus giving the plate the form of a deep trough, or gutter, with a semi-cylindrical bottom, and nearly upright sides, at so much of the foremost end of the plate as may have arrived at, or passed beneath, the last-mentioned convex roller.

The bending operations of the said two rollers are very similar, except as to the extent of bending and turning up that they produce—the first roller bending the middle part of the plate only partially down into the depth of the concave groove in the bed, and only partially turning up the borders of the plate; but the second roller completes the bending down to the bottom of the concave, and the turning up of the borders nearly to upright positions; and as the foremost end of the plate proceeds onwards along with the bed beyond the second roller, the said end arrives at the point, or tapering end, of a fixed mandril, the bulb, or full-sized part of which mandril, is lying motionless at the bottom of the groove in the bed, being kept stationary therein by means of a long stem to the mandril, which stem extends onwards to a fixed support at a distance; and in projecting further onwards, the said foremost end of the plate, which, as already stated, has been turned up to the form of a deep gutter, gathers the bulb of the mandril into the concavity at the bottom of that gutter—the size of the bulb being suitable to the said concavity; and having thus become lodged therein, the bulk will keep open the interior capacity, or bore, of the intended form of a tube during the further operations, whereby the borders of the plate are to be turned over, and then their edges brought together, either with those edges overlapping, or merely meeting edge to edge, as the case may be.

The operative parts, by which the said turning over is to be performed, are a pair of rollers, whereof one roller is situated at each side of the bed; but above the same, with their circumferences meeting over the middle of the width of the bed, and the axes of the two rollers are inclined from vertical positions in contrary directions one to the other, and the edges of the rollers are conical, but concave, to a quadrant of a circle, of the same size as that of the groove in the bed, so as to leave a semicircular aperture between the conical and concave circumferences of the two rollers at the meeting of those circumferences, which meeting is over the middle of the bed, and so low down as that, owing to the contrary inclinations of the axes of the two rollers, the said semicircle will conform with the semicircle of the groove in the bed, in order (between the two rollers and the groove) to surround the whole circumference of a circle of the proper size for the exterior of the intended tube; whilst the bulb, or full-sized part of the mandril, is occupying a circle of the proper size for the interior thereof, and when the foremost end of the plate, in its motion onwards with the moving bed, arrives at the said pair of rollers (that end being in the state of a deep gutter, with a mandril lodged in the bottom thereof), those rollers operate laterally against the outsides of the two nearly upright sides, or borders, of the deep gutter, to bend those sides inwards one towards the other; and, owing to the inclining positions and conical forms of the said two rollers, the direction in which their said lateral operations press the sides of the plates inwards, are directions of contrary obliquity downwards towards the mandril, which occupies the semi-cylindric bottom of the deep gutter; and the consequence is, that the two borders of the plate become turned over and bended down upon the mandril nearly in conformity therewith, and with the aforesaid semi-circular aperture, that is left between the meeting edges of the two rollers, that semicircle being at the upper half of the intended form of a tube, and the lower half thereof being the semi-cylindric groove in the bed; wherefore, as the plate has previously had its middle part bended down to conformity with that groove, the whole breadth of the plate has become turned up nearly into the intended form of a tube, after its two border parts have been turned over and bended down, as aforesaid, nearly to conformity with the mandril, by action of the two said rollers.

But, in order to complete such bending down, and render the same more effectual and permanent, the foremost end of the plate in its further progress onwards beyond the said pair of rollers (that end being nearly in the intended form of a tube with the mandril, in the interior thereof), the said end is carried along with the bed beneath the concave grooved circumference of another revolving roller, which presses forcibly downwards upon the plate, to complete the bending down of the two edges thereof into a more exact conformity to the mandril, which is lying motionless within the said form of a tube which the foremost end of the plate has assumed, and the mandril gives internal support thereto, to prevent the plate being bended inwards, so as to encroach upon the interior of the intended form of a tube; but the mandril keeps that interior fully open to the intended size. And, as fast as the foremost end of the plate passes onwards beyond the last-mentioned revolving grooved roller, so much of the length of the plate as has so passed will have been turned up into the form of a tube; and when the whole length of the plate has so passed beyond the said roller, the operations of turning up the plate into the form of a tube, by aid of the machinery, will have been completed. It will be understood, from the foregoing description respecting the progressive stages of bending and turning of the plate from its flat state to that of the form of a tube, that, although the said stages follow one after another in due succession, as already described, yet the description relates chiefly to the bending of the foremost end of the plate to each one of those stages in due succession; nevertheless the bending of other succeeding parts of the length of the same plate to other earlier stages of the bending is going on at the same time, and, in fact, all the stages may be going on at once—for instance, at the same time that the last concave grooved roller is finally completing the bending of some one part of the length of the plate, at or near the foremost end of that length, the aforesaid pair of conical grooved rollers are in the act of turning over and bending down the borders of the same plate at another part of the length thereof, further behind the foremost end; also, the aforesaid second convex roller is bending down the middle part of the plate to the bottom of the groove in the bed at another part of the length of the same plate, still further behind the foremost end; and in like manner the first convex roller is partially bending down the said middle part of the plate, to part of the depth of the said groove, at another part of the length of the same plate, still further behind the foremost end; and the hindermost end of the plate is remaining in its original flat state; and note, in case the edges of the plate, which are to be turned up in manner aforesaid, are required to overlap for making lap-jointed tubes, then two or more fixed guides may be applied, in order to insure that one of the two edges shall be within the other of those edges, before the pair of conical grooved rollers begin to act laterally for bending the two borders of the plate inwards, one towards the other, and downwards towards the mandril, in the manner already described. The said fixed guides are the extreme ends of strong pieces of metal, fixed fast to the framework of the machinery; in the interval between the second convex roller and the pair of conical grooved rollers, the said extreme ends stand up from the framework, in order to reach upwards and over the moving bed—so that the sides of the deep gutter form, into which the plate is bended, will be brought into contact with the said ends during the onward motion of the said deep gutter along with the moving bed; the extreme end of one of the said fixed guides will be thus in contact with the outside of the plate at one of the said sides of the gutter; and, in consequence of a suitable oblique direction that is given to such end, it will cause that side of the gutter to be bended somewhat inwards, before the action of the conical grooved roller, belonging to the same side, against the outside thereof, begins to bend the same inwards, and thereby the said fixed guide facilitates the bending operation of the last-mentioned roller, causes the same to bend down that side sooner than the opposite side can be bended down by the opposite conical roller, the bending operation of which roller is somewhat retarded by the end of the opposite fixed guide being in contact with the inside of the plate at the opposite side of the gutter; or, instead of such fixed guide, as aforesaid, small rollers mounted on fixed centre pins may be applied—so as to operate against two sides of the deep gutter, for commencing the turning in of those sides, before they arrive at the pair of conical rollers. And still further, to ensure that one edge of the said deep gutter shall overlap the other edge, as aforesaid, one of the two conical grooved rollers, already described, should be situated somewhat in advance of the opposite roller, in the direction of the motion of the carriage, in order that one side of the said deep gutter, in moving along with the carriage, may be brought into contact with the aforesaid advanced roller, and be thereby bended down upon the mandril, at a somewhat earlier period than the opposite side of the gutter will be bended down by the opposite conical roller. The several revolving rollers (mentioned in the foregoing description for some of those rollers) are turned round by means of suitable toothed wheelwork belonging to the machinery, and connected with the pinion and rack, or other suitable means, by which the bed and the plate are moved endways forwards. And note, although the mandril in the foregoing description is a stationary mandril, with only part of the length thereof of the full size, nevertheless a cylindrical mandril, of the full length of the intended form of a tube, and tapered at foremost end, may be used, if preferred, such mandril being carried endways along with the plate, instead of being kept stationary in respect to the plate, as before described.

The patentee then proceeds to describe the drawings annexed to his specification; but to follow him would require much more space than can be allotted to the subject in the columns of the *Mining Journal*. In conclusion, he states—I hereby declare, that the new invention, whereof the exclusive use is granted to me by the letters patent, hereinbefore recited, consists in the improved mode, hereinbefore described, of moving up or bending flat plates of malleable metals, or mixtures of metals, into the form of tubes, by aid of machinery, of the kind hereinbefore described; and, although most of the several parts of that machinery have been heretofore used in other machinery, the combination of those parts one with another, for the purposes aforesaid, and the manner whereby the turning up, or bending, is performed by such combination, constitutes my new invention. The peculiarity and novelty of the said combination of parts, and of the said manner of turning up, or bending, being that the flat plate is laid upon a bed over a long groove therein, which bed, together with the plate, is moved endway forwards beneath a series of rollers; by action of some of which rollers (either direct action, or by the intervention of a mandril), the middle part of the plate is bent down into such groove, first to a part of the depth thereof, so as to bend the plate to a shallow gutter form, and next to the bottom thereof, so as to bend the plate to a deep gutter form. The two sides of which deep gutter form, are (by action of other of the said rollers) afterwards turned inwards or towards the other, and downwards upon a mandril, either stationary or moveable, with the plate—the two sides of the said deep gutter, which are so turned down, either meeting edge to edge, or with the edges overlapping, as may be required.

Patent-office and Designs Registry, 210, *Strand*.

NEW ELECTRIC LIGHT.

An experiment was made on the Great Western Railway, on Saturday last, to test the power of a new species of light produced by electricity, particularly with a view to its being used by railway trains. The light is produced by an apparatus invented by M. Le Mott, a French gentleman, who has been for several years employed in electrical experiments in Russia, and whose discoveries in that department are well known to the scientific world. At half-past six o'clock a truck, containing a wooden square box, about the size, though not the shape, of a sentry-box, and having a galvanic battery of some 60 or 70 small jars disposed around it, was attached to the last carriage of the train then about to proceed from Paddington. The light was produced inside the box, and the rays, condensed and heightened by a powerful reflector, were emitted by an aperture contrived for the purpose. The light was produced before the train left Paddington, when a dazzling blaze filled the whole of the spacious station, casting the numerous gas lamps there completely into the shade. As the train proceeded on its way, the reflection left a long track of clear bright light for the distance of a mile and more behind it, in such a manner as to render it utterly impossible that any train coming up behind should run into it, except as the effect of deliberate intention. The reflection, as seen from the carriage, was very beautiful, the prismatic colours being distinctly and vividly delineated along the outer edge of the circle of radiation; and as these fell upon the dense column of smoke ascending from the engine, the effect was singular and striking. The night was dark, but clear, and so far favourable to the experiment; and objects, such as a bridge, were rendered distinctly visible at the distance of about two miles. The experiment was made as far as Slough, on arriving at which station the truck was detached from the train, and continued there for about half-an-hour, till the up train arrived, with which it returned to town. While at Slough, the light was turned in the direction of Windsor Castle, as it was the expectation of M. Le Mott, who accompanied the experiment, that it would be seen from thence. While there a gentleman stationed himself at the distance of 200 yards or so from the apparatus, and read a newspaper by the light produced, which he found he could do with perfect ease. The apparatus then returned to town in the same manner, the light being continuously intense during the whole of the journey and return; and we were informed by the ingenious inventor that there could be no difficulty in keeping it up for the whole night. The experiment afforded great satisfaction to all who witnessed it, the only drawback being, that the apparatus, having been in the first instance adapted for stationary experiments, suffered considerably from the jolting inseparable from railway motion—a defect which the inventor considered might be with ease overcome in any future experiment. This is, we understand, the first time that light produced by electricity has been applied to railway purposes; and if its use should be found practicable, there can be no doubt that it will add greatly to the safety of night travelling by railway.—*Morning Chronicle.*

THAMES TUNNEL COMPANY

The number of passengers who passed through the Tunnel in the week ending Nov. 18, was 16,175; amount of money, £67 7s. 11d.

The Compendium of British Mining.

ORIGINALLY COMPILED AND PUBLISHED IN 1843.

REVISED, CORRECTED, AND ENLARGED FOR THE "MINING JOURNAL,"

BY J. Y. WATSON, ESQ., F.G.S.

TIN MINING.

The mode of finding tin by shoding, or digging, small pits, to trace out the course of the lodes, and by streaming, is supposed to have been known in Cornwall before the arrival of the Phœnicians on the Cornish coast, 500 years before the birth of Christ. It is said, that tin was first discovered in the ancient moors by the inhabitants, who using peat as fuel, were accustomed to dig for it in the moors, and discovered the mineral without exactly knowing its value, until the Phœnicians made tin such an important article of their commerce. This commerce is noticed by the prophet Ezekiel, and is supposed to have been alluded to under the name of Cassiteros, in Homer's *Iliad*, written 900 years before the Christian era.

The Phœnicians and Carthaginians not only concealed from other nations the situation of the country from which they derived so important an article of their commerce, but suppressed by force the attempts of the Greeks and Romans to open a communication with it. Mr. Hawkins, in a communication some years since to the Geological Society of Cornwall, supposed the medium, or entrepot, of the commercial intercourse which so long subsisted between this country and the Phœnicians, was Gades,* a colony established at a very early period on the western coast of Spain, and contiguous to that province, which abounded in mines of silver. Falmouth, called by the Greeks "the mouth of the Dunmonii Island," was supposed to have been the place from whence the tin was shipped; but the discussion of this point would be more interesting to the antiquary than to the miner.

Taken in the aggregate, the tin mines of Cornwall have not been profitable for many years. From the reigns of Charles I. to George I., the black tin produced, averaged 1500 tons yearly; the produce then increased, and in the year 1742, a proposal was made by the Mines Royal Company, in London, to raise 140,000*l.*, to encourage the tin trade, by farming that commodity for several years, at a certain price. A committee of Cornish gentlemen was appointed to consider of the proposals, and they reported "That the quantity of tin raised yearly in Cornwall, at an average, for many years last past, hath been about 2100 tons, and resolved, that 3*l.* 9s. for grain tin, and 3*l.* 5s. for common tin, are the lowest prices for which such tin will be sold to the contractors, exclusive of all coinage duties and fees. From the year 1750 to 1837, the annual produce never exceeded 5000 tons, but generally averaged 2500 to 3500 tons. In the latter year an application having been made to the Government to abolish the duty,† the state of the mines was officially ascertained, and the result showed that, upon 58 mines, the loss was 80,517*l.*, and upon 10 the profit was 20,358*l.*, showing a net loss of 60,159*l.* From 1787 to 1817, large quantities of tin (nearly 1000 tons) were annually supplied by Cornwall to East India companies for exportation to India, which tended to keep up the price; but, unfortunately for Cornwall, this connection with the East India Company terminated in the latter year, and very few parcels were afterwards exported. Of late years very few tin mines have paid for working; but we are glad to see several new buyers for tin have appeared in the market within the last few months, and the consequence is, a rise in price of more than 6*l.* per ton. Should this continue, it will be a great boon to the miner, and to those capitalists who have, under very inauspicious circumstances, kept tin mines at work.

THE TIN DISTRICTS.

The mines and minerals of St. Just (chiefly tin) are comprised within a district of the north-western coast, of not more than three miles long, and one mile and a half in breadth; but, after giving a slight sketch of this district, other tin and miscellaneous mines will be given under this head—viz.: some of Breage and Marazion. St. Just is on the western shore of Cornwall; its cliff scenery is of the boldest character. Its mines, being almost all either in the slate (which, where it occurs, is seaward), or in the granite; many of the levels are extended beneath the bed of the ocean, the adits usually opening so far above the sea level, as to be out of reach of the waves. The labourers descend to the entrance either by a zig-zag path, as at Levant, or by ladders in the face of the cliff, as formerly at Botallack. Of its minerals, bismuth has been found in Botallack and Levant; silver in Levant; iron ores, in great variety, in Botallack, Wheal Edward, Wheal Cock, &c.; cobalt in Botallack; pitch-blende and granite in Wheal Edward; oxinite, hornblende, apitite, epidote, and jaspery iron ore in Wheal Cock; calc-spar and arragonite in Levant; schorl in Botallack; and opal in Wheal Maitland. But the directions of the various veins are the most remarkable features of this district; the metalliferous veins bearing from north-west and south-east, to north and south; whilst the cross veins run about north-east and south-east, or not very different from the direction of the lodes in other parts of the country. There are but few instances of a lode, which has been cut off by a cross-course, being honestly recognised on the opposite side; so that the "heave" of one vein by another, which in other parts of Cornwall occasions no uneasiness for the chance of re-discovery, is here of considerable moment and uncertainty; and the hardness of the rock (country) is an obstacle to the shafts being sunk *perpendicularly*, and to the extension of levels at right angles to the lodes (cross-cuts) for the discovery of parallel branches.

In Little Bounds and Wheal Cock the excavations have been made into the sea; in the first, it being on the beach, and dry at low water, it was secured with well-caulked planks; in the second, the hole made by a borer being but small, it was stopped by a plug. The site of some of the steam-engines on the top of the cliffs is highly picturesque. The water from most of the mines is used for domestic purposes, and sometimes 50 women may be seen at once standing around an engine-house, washing the linen of their families in the warm water from the steam-engine. This particularly occurs at Boscean and Boscaswell Downs, and Wheal Owls; and it is rather a singular sight, of a Monday morning, to see the females hastening to the mines, bearing on their heads their washing-trays, and the linen of their respective families.

In this district there are several stream works for tin—the principal of which is Carnon, situated near a navigable branch of the river Fal, which receives several rivulets from the hills of Stythians and Gwennap. The vale of Carnon is 300 yards in breadth; the hills on the south being rather steep—whilst, on the north, their declivity is very gradual. The largest quantity of tin ore was found where the Stythians Vale, and a glen called Smelter's-House Vale, open into the Carnon Vale. Small pieces of gold have been found among the tin ore in this stream. Tin to the amount of 8000*l.* a year was formily raised from this vale. The Drift Moor stream work is near Penzance, forming part of a valley, which opens at Newlyn. This valley was explored for tin, at a very remote period—an ancient water-engine having been found by the last tinners buried in the alluvial soil. The statistical accounts of the different mines will follow hereafter.

THE MINES OF MARAZION.

The principal mines in this district were worked a few years since by Mr. Thomas Saunders Cave. They consisted of Great Wheal Fortune, Rospeath, Wheal Bolton, Owen Vean, Wheal Prosper, Wheal Friendship, &c., &c.—all being on branches of the same great champion lodes, and Gwallon on parallel lodes to the south. Some have been resumed under new names—whilst others remain idle. The total loss by Mr. Cave on 27 mines amounted to 192,722*l.* 14s.

Great Wheal Fortune was worked by the great grandfather of the present Sir C. Lemon, Bart., and made a profit of 100,000*l.* During the working of Mr. Cave, it yielded ores to the amount of 50,000*l.*; but, owing to the extravagant outlay, was abandoned with the loss of 29,658*l.* 11s. 11d.

Rospeath was worked for copper to a depth of 57 fms.—the lode being a continuation of that in Great Wheal Fortune. This mine yielded ore, but was abandoned with a loss of 15,637*l.* 18s. 10d.

Wheal Bolton is separated from Rospeath by a very large cross-course, and the mine has been worked for copper to about 80 fms. under the adits of 7 fms. There are two lodes, which, dipping different ways, are heaved the same way by a cross-course; the loss on this mine was 15,657*l.* 18s.

Gwallon is 40 fms. under the adit of 15 fms., and is a very old tin mine. Mr. Cave's loss on this mine was 16,485*l.*

Owen Vean was worked in 1750, and left large profits. Mr. Cave's loss upon it was 22,234*l.* 3s. 4d.

Wheal Prosper was abandoned with a loss of 23,804*l.* 13s. 10d.

* Gades, according to Velleius Paterculus, was founded the same time as Utica, 287 years prior to the foundation of Carthage, which took place 878 years before Christ.

† Previous to the year 1838, the duty paid to the Duchy of Cornwall, upon all tin raised, was 4s. per 120 lbs., and the fees to officers, and loss of time, were equal to 1s. more. This gave the Duke of Cornwall about 10,000*l.* annually.

The Marazion Mines, consisting of Wheal Virgin, Wheal Maid, Rodney, Crab, and Tregurtha Downs, at an old working, left a profit of 40,000*l.*, and, about 17 years ago, were resumed; and from 1831 to 1841 returned ores to the amount of 150,000*l.*, and were then abandoned with a loss.

The only patch of granite within this district, which is one of the most interesting in Cornwall, is St. Michael's Mount. That part of its base which lies towards Marazion is of slate, whilst its summit and southern side are of granite. St. Michael's Mount is more than 200 ft. high, and one mile in circumference at the base, and said to contain seven acres, and is entirely composed of granite, with the exception of a patch of the slaty felspar rock, which rests on its base on the north, north-east, and partly on the north-west sides. The junction of the two rocks is well shown in the beach, as are also the granite veins by which the slate is traversed—some of these are almost entirely micaceous, containing topazes, apalite, crystals of tin ore, and other rare and curious minerals; and some of these may be traced in both rocks. There are numerous fine elvan courses in this district, which traverse the slate. The first occurs in Great Wheal Fortune Mine, and in and about it much of the produce of that mine occurred; a second in Gwallon; and a third in Marazion Mines. One of these is again seen in Wheal Darlington, and at the back of Penzance Pier, along the beach, between that place and Newlyn, and through the *Wherry Mine*, where tin ore of 70,000*l.* value was raised from it.

St. Michael's Mount, "*the pilgrim's holy vaunt,*" was named in Cornish, as Carew informs us, "*Caraclowse in Cowse;*" in English, "*The houre rock in the wood,*" which now is at every flood encompassed by the sea, and yet at some low ebbs roots of mighty trees are descried in the sands about it. Later historians state, that this is probably the St. Michael's described in a charter of Edward the Confessor as *near* the sea—"*Sanctum Michaelum qui est juxta mare;*" and that Florence, of Worcester, expressly asserts that it was formerly five or six miles from the sea, and enclosed with a very thick wood, and therefore called in British—"*Carreg lúg'en Kug—le hore rok in the wodd.*" The "hoare rock" was certainly an appropriate name, as the weather-beaten surface of its massy granite rocks still give it a greyish hoary aspect, which would be more striking in contrast with "greenwood" scenery. It is supposed that, by a convulsion of nature in 1099, the submersion of the wood and adjoining land took place.

[*To be continued in next week's Mining Journal.*]

Mining Correspondence.

ENGLISH MINES.

ASHBURTON UNITED.—Capt. J. Kernick (November 20) reports—The Brothers' lode, recently cut in Hobson's 14 fm. level, is 4 ft. wide, with a branch of grey ore on the north wall from 6 to 12 inches wide*, of high produce, samples of which I have sent to be assayed, and I will forward the result in the course of a few days; when this level, which is 32 fms. from the surface, is extended westward in the light killas, I believe we shall be in a position to throw up large monthly returns of superior copper ore. The tin pitches and other parts of the mines are the same as when last reported.—[*In last week's Journal read 1 ft. instead of 9 ft.]

BARRISTOWN.—Capt. T. Angove (Nov. 17) reports—The ground in the 27 fm. level cross-cut end, south of eastern flat-rod shaft, is fair for driving. In the 16 fm. level end east, the lode is still poor, but from the quantity of water proceeding from it, we think we are near the cross-course. The adit end east is producing about 1 ton of lead per fm.; the pitches in the back of this level look well; we have sunk from 2 to 3 fms. in the bottom of this level, 10 fms. behind the end, and the lode is 5 ft wide, producing 1 ton of lead per fm.; the quantity of water in it is very great. We expect to have another cargo of lead, 25 tons or upwards, ready about the first week in December.

BEDFORD UNITED.—Captain J. Phillips (Nov. 22) reports—At Wheal Marquis, the engine-shaft is 10 fms. 3 ft. under the 9 fm. level. In the 90 fm. level east we have cut into the lode and capels about 9 ft., but have not yet reached the north wall, the capels proving very hard and troublesome to get through; about 18 inches of the lode is producing good work. There has been no lode taken down in the 80 fm. level east since my last. We intend taking down the lode in the 70 fm. level east at the end of the month; the south wall of the lode presents equally favourable indications as stated in my last report.

CALLINGTON.—Capt. J. T. Phillips (Nov. 20) reports—In Kelly Bray engine-shaft, now sinking below the 20 fm. level, the lode is 2 ft. wide, with spots of copper ores. In the 20 fm. level east, since last report, we have driven through a very promising piece of ground, where the lode is 2½ ft. wide, carrying a great deal of fluor-spar, and rich stones of yellow copper ores—this appears like the top of a bunch; the lode in the present end is small, producing copper ores. In the 90 fm. level east, on this lode, we are now rising against the 70 winze, and hope to communicate before the week expires; the lode is 18 inches wide, composed of peach, mundic, black jack, and copper ores, very promising. In the 70 east the lode is small, producing copper ores; the stopes, in the back of this level, will produce 4 tons of ore to the fathom. In the winze, below the 50, no lode has been taken down; the stopes, in the back of this level will produce 2 tons of ore to the fm. In the 100 fm. level south we are opening tribute ground. In the 90 south no lode has been taken down. At the south mine, in the 125 south, we are opening tribute ground; in the north end the lode is producing silver-lead ores. In the 112 north no lode has been taken down; in the rise, in the back of this level south, we are opening ground that will work at a high tribute. In the 100 fm. level north we have not yet got the lode; there is more water issuing from the end, and we expect the lode is near.

CAMBORNE CONSOLS.—W. F. Daniell (the resident manager) reports—Having completed the repairs of Martin's shaft, and cleared the adit level on Martin's lode into the winze, I have the pleasure of informing you, that to-day we sent up about 30 kibbles of ore from the sink. It will dress up, without unusual care, to about from 15 to 20 per cent. produce, being fine solid masses of yellow ore, such as has been rarely seen in this county, on the commencement of a new mine, and it has attracted much attention in the course of to-day. The appearance of the lode altogether justifies my saying, that but for the advanced state of the season, we could directly get up a pretty good sale; as it is, the increase of water from the surface will, I am apprehensive, interfere with our sinking, having cut into a hollow orey lode to the west of our winze, which is giving out a great deal of water. From present appearances it would be imprudent to incur the cost of keeping it away, for, as we have a 20 and a 40 fm. level below it, the inconvenience is only temporary, because from these points we shall relieve ourselves, and the ore will be broken thence clean and dry, and at less than half the expense. In the meantime, I should observe that the fact of such a considerable drain of water from the westward is clearly indicative of our having a large orey lode of some length before us, in whole ground to surface, and capable of being drained 80 fms. deep, without the aid of any sort of machinery, which is of vast importance. We shall commence driving west upon the south entral lode on Monday, which, although only just off the cross-course, has some good stones of ore in it; and, judging from what it has done in Dolcoath, close adjoining, I anticipate very interesting results upon a trifling outlay, also not requiring any machinery. The end of the 20 fathom level cross-cut, formerly driven, has reached within 4 or 5 fms. of this lode; I need hardly, therefore, point out the importance of pushing this end to its object, the ground being good. A similar observation is applicable to the 40 fm. level, which is driven to within a few fathoms of the south entral lode; one will intersect the lode 60, and the other 80, fathoms from the surface. Our neighbours on the eastern boundary—the Dolcoath adventurers—are driving cross-cuts north, at an 80 and a 40 fm. level, to intersect some of our north lodes. We may, therefore, for the present, wait the result of their operations, though I think it worth our while to explore the silver lode. We have not yet cleared the levels west of the sink, on Martin's lode; but it may be desirable to drive the adit end immediately upon that lode, with a view to explore it, and to take up a great deal of the surface-water. Excepting the small buildings which have been recommended, our cost, for some time to come, will be mostly confined to labour.

DEAN PRIOR AND BUCKFASTLEIGH.—Capt. H. Choake (Nov. 22) reports—We have intersected the lode in the 40 fm. cross-cut; the capels are very hard, intermixed with small bunches of mundic and spots of ore. We shall hasten on to cut through the lode to the south or hanging wall, to ascertain its size and quality. I have set to the men to drive 6 ft., or cut through the lode, at 11*l.* per fm.

EAST CROWNDALE.—Capt. S. Paull (Nov. 18) reports—We have cut through Thomas's lode, to the east of Diamond's shaft, and beg to state the same level is being extended still further south, to intersect a large and promising lode seen at the surface; so far as we have seen of its underlie, I expect we shall cut it at this the 17 fm. level in about 6 or 7 fms. driving. The cross-cut, north in this level, has been driven in killas, much mixed with spar, capel, &c., but as it has rather improved in the past week, we are expecting every day to cut the north lode, but, from the little seen of it from surface in this place, it is rather difficult to state the exact underlie. The lode in the adit level, driving west on Thomas's lode, is 14 ft. wide, composed of peach, killas, spar, prian, mundic, and tin, worth about 30*l.* per fm.; the stopes in the back of this level continue without much variation—a very large lode, composed of peach, prian, spar, killas, mundic, and tin, worth about 25*l.* per fm.; the winze below this level has been suspended, and the men have resumed sinking Thomas's shaft, on the course of Thomas's lode, an account of which you shall have in my next.

EXMOOR WHEAL ELIZA.—Capts. W. H. Whitford and T. Dunn (Nov. 28) report—The first week since our last our shaftmen made good progress in sinking, the ground being favourable; but, in consequence of some heavy floods which broke down the leats, together with some breakages in the rods, little could be done in the bottom of the shaft during last week; at present it is all right, and the summen have resumed their sinking operations. We have reason to hope for better success in future.

HOLMBUSH.—Capt. W. Lean (Nov. 21) reports—In consequence of the accident in the breaking of the whim ropes, the stuff has so accumulated, that we cannot by any possibility resume sinking the diagonal shaft for a few days, until we have drawn it away; in the meantime the shaftmen are employed in driving the 120 fm. level, east of Hitchins's shaft, on the north part of the lode, to communicate to and unwater a winze that has been sunk below the 110 fm. level, which will be accomplished in about a fortnight, after which we shall be able to set two tribute pitches, one in each end of the winze. The lode in the 132 fm. level west is at present disordered by several small cross-courses; we expected ere this to have intersected the great course-course, but it must have taken a quicker underlie west, below the 120 fm. level, than it did above. The lode in the 120 fm. level south is 4 ft. wide, composed of quartz and lead, saving work. The lode in the 110 fm. level south is 4½ ft. wide, producing 2 cwts. of lead per fathom, ground very favourable; the lode in the stopes, in the back of this level, is also large, and producing a fair quantity of lead. The lode in the 100 fm. level south is 2 ft. wide, composed of soft white spar, prian, and stones of lead, all of which is saved; the Flap-jack lode, in the same level east, is 2 ft. wide, composed of mundic, blende, spar, and stones of copper ore, ground favourable; here, also, we are daily expecting to intersect the great cross-course, and from the nature of the ground, we cannot be far from it; we are still opening ground on the copper branch between the 100 and 110 fm. levels, which is producing stones of ore of good quality, but is not yet clear of the lead lode. The schooner *William*, Capt. Horton, will be at Calstock about the middle part of this week, to ship the lead for Messrs. Michell and Son, for Point, wind and weather permitting.

KIRKCUDBRIGHTSHIRE.—The agent (Nov. 18) reports—In the 50 end, east of Stewart's there is a fine lode, 3 ft. wide, composed of spots of lead, in a soft spar and flookan; the lode in the 50, west of this shaft, is 15 inches wide, with occasional stones of lead; the lode in the 50, east of Keith's, is of a similar character. We have suspended the 40 and 50 ends, west of Keith's, and put the men to sink a winze in the 40, west of this shaft, to prove the ground in this direction; and on account of the bad air in the 30, east of Stewart's, we have put these men to sink a winze to the west of the rise, until that bargain is holed to the level above. The lode is 5 ft. wide in the rise, yielding 7 cwts. of lead to the fm. In the 20 east the lode is still kindly, with a deal of jack, copper, and sulphur in it, and a small rib of lead, but we find it is not quite free from the black rock yet on the north side.

LAMHERHOOE WHEAL MARIA.—Capt. John Tabb (Nov. 22) reports—The engine-shaft has been sunk 49 fms. from surface, and will reach the 50 fm. level by the end of this month, when they will have to cut plat, &c., which will take December month to complete, and shall then have a cross-cut to drive to intersect the F lode (allowing its underlay to be 3 feet in a fathom) 7 fms.; this lode (F) will pass through the engine-shaft between the 60 fm. and 70 fm. levels. At Davey's shaft the men are engaged in cutting plat, which will be completed at the close of next week, and shall then have a cross-cut from 7 fms. to 8 fms. to intersect the K lode.

LEWIS MINE.—Capt. S. S. Noel (Nov. 18) reports—The lode in the 70 east is 1 ft. wide, composed of a soft spar, peach, and brent, with some stones of tin; the lode in the 70 west, on south branch, is 9 in. wide, yielding some good quality tin stuff. The lode in the 60 east, on south branch, is 18 inches wide, worth 9*l.* per fm.; in the 60 west, on south branch, the lode is 1 ft. wide, worth 7*l.* per fm.; the lode in the winze, sinking under the 60, is yielding fair quality tinstuff. The lode in the 50 east, on the south branch, is 1 ft. wide, and worth 8*l.* per fm.; the lode in the 50 east, on Ralph's branch, is 1 ft. wide, producing good stones of tin. The lode in the 40 east, on the south branch, is 1 ft. wide, and worth 5*l.* per fm. The south lode, in the 10 east, is 6 in. wide, and worth 3*l.* per fathom.

LLAWRCWMBACH.—Capt. Matthew Francis (Nov. 20) reports—We are principally engaged with building the engine-shaft from adit to surface, the level and office being finished. We are stoping some pretty good ore ground in the back of the adit, east of the engine-shaft, at 40s. per fm.

LLWYN-MALEES MINE.—Mr. Adam Murray, jun. (Nov. 11), reports—I have visited these mines, according to your request, and found they had progressed so far satisfactorily, since my last inspection, that though the amount expended in exploration has been very limited, and the work tardily and irregularly performed during that period, yet I was happy to perceive that, in spite of these obstacles, the important desideratum, and what I believe to be the key to the future prosperity of the mine, was in some measure solved. From the commencement I had anticipated the junction of the various branches of lead, as they extendid in depth, as a reasonable indication for expecting a profitable lode in this stratum; and I am happy that I am able to report, that at the deepest parts of the mine in Oliver's winze and the London shaft (both below the 14 fm. level), a junction of two or three out of the 12 or 14 visible branches has taken place; thereby rendering the productiveness of the ground equal at least to 10 cwts. of lead more than the ground above. This tendency of the several branches in this large porphyritic course to join in depth, and to concentrate themselves into one or several courses of ore, is, I think, primarily proved in the appearances of the shaft and the winze, and this, I consider, ought to warrant the expectation of very important results in sinking deeper. I found the amount of excavations mentioned in the monthly cost to be correct. The 8 fm. level west has about 4 or 5 fms. to reach the western shoot of ore, and the level is not in orey ground at present. The 14 fm. level west is in a fine porphyritic course, like the London shaft and Oliver's winze, with several branches of ore interspersed through a course 10 to 14 ft. wide. The eastern levels are poor, being, I conceive, out of the shoot of ore; I would certainly not advise any tutwork to be expended on them at present. I found the machinery in good repair, the dressing-floors in good order, and the pond substantially built up. There is an adequate quantity of water from the pond to work a wheel of 4 ft. breast, and sufficient fall, below the present floors, to fix one of from 20 to 30 ft. diameter, so as to attach the flat-rods for pumping, and thus relieve the present wheel, the breast of which might easily be enlarged for stamping and crushing the ore. These are matters, however, for future consideration, when the mine is proved deeper; but it is satisfactory to know at present that it can proceed without steam power. Since my visit to these mines in December last, I found that 54 tons 6 cwts. of ore had been raised, between the 8 and 14 fm. levels, and sold for the sum of 553*l.* 7s. 3d. About 120 fms. were stoped to raise this quantity, and the expense amounted to 510*l.* 12s., leaving a profit of 42*l.* 12s. 3d. on the actual raising of the ore; and the value of the fathom of ground is about 4*l.* 12s. The tutwork, agencies, and other expenses on the mine during these nine months equal 461*l.* 3s. 11d., minus 42*l.* 15s. 3d., before mentioned; therefore the cost expended on exploration (such as the London shaft, &c.) would amount to 418*l.* 8s. 8d. The London shaft is completed 22 fms. from surface, and has cost about 146*l.* 10s. Oliver's winze is 2 fms. below the 14 fm. level, and cost about 22*l.* The 14 fm. level has been extended westward 8 fms. 2 ft. 10 in., and has cost about 64*l.*; and the 8 fm. level west has been extended 2 fms. 1 ft., at a cost of 14*l.* or so, making altogether 246*l.* 10s. expended in exploration, and leaving 171*l.* 18s. 8d., or 19*l.* 2s. per month, for agencies and contingencies. The cost for September, October, and November will be met by 25 tons of ore, as nearly as can be approximated. The suspension of all operations during part of this time, and the irregularity of the work will, of course, leave the cost low against that amount, and at the same time it speaks for the improving character of the ground. The consideration of these months must be left for future inspection; but I think it is clear that after this amount of ore has been disposed of, the future raising of ore should be suspended, until the mine is at least 10 fms. deeper; and if the present appearances continue through that space of time, I believe a great quantity of ore will be discovered, that may be raised at considerable profit. In the future operations of the mine, I would suggest three propositions, either of which might be carried on:—1. To sink the London shaft by six men and three labourers, with the other contingencies of the mine, per month, 40*l.*—2. If Oliver's winze is sunk at the same time, it would increase the monthly cost to 60*l.*—3. If the 14 fm. level is driven west at the same time, 70*l.* The three operations it would be advisable to carry on together; but it would be better to adopt the first alone, consistently and determinedly, than the three operations in an irregular manner.

— Since Mr. Murray's report on the above mine, we have received, in our correspondence, the following report from Capt. H. Francis, dated Nov. 17.—I am most happy to say, that the lode in Oliver's winze has much improved; we have a branch of lead ore on the foot-wall 15 in. wide. Independant of this, we have nine branches of ore in the whole width of the winze. The same lode in the London shaft also looks much better. We have a branch of ore in the foot-wall nearly a foot wide, and all the other branches on the north side are now fast falling into this main branch on the foot-wall on the south side. We may expect to find a fine course of ore in sinking this shaft a few fathoms deeper. The 14 fm. level west is also improving.

LOSTWITHIEL.—Capt. John Offord (Nov. 22) reports—That the branch going east is smaller, but yielding occasional stones of copper ore; the end is set for six weeks, at 4*l.* 10s. per fathom, the ground being much more easy for driving, and more congenial for ore than in the cross-cut.

PENCRAIG-DU AND CAENANT.—Capt. M. Francis (Nov. 22) reports—The adit driving west, in Pencraig-du, is in a lode, containing mixed ore and spar, for a width of 8 in., and apparently will go forward into good ore ground. Caenant rise has some spots of ore, but nothing of importance.

SOUTH MOLTON CONSOLS.—Capt. W. H. Whitford (Nov. 23) reports—The cross-cut, in the 12 fm. level, is extended from the engine-shaft about 11 fms south-east towards the lode; during the last fortnight the ground has been very stiff, but I hope by the end of next week we shall cut the lode; we have just passed through some branches of spar, impregnated with particles of lead, which is a favourable indication. Our engine works well—the consumption of fuel costs about 4*l.* per month.

SOUTH WHEAL TRELAWNY.—Capt. W. Jenkin (Nov. 20) reports—The lode south, in the 30 fm. level, is 2 ft. wide, composed of barytes, flookan, spar, can, killas, with spots of rich copper ore and sprigs of lead, with ground favourable. Also on the lode north of the cross-cut, in the 30 fm. level, we have intersected a floor of elvan, which has disordered the lode, with ground hard. Water a little quicker.

TAMAR SILVER-LEAD.—Captain J. Sprague (Nov. 20) reports—In the engine-shaft no lode has been broken since last reported on. In the 175 end the lode is 9 in. wide—saving work. In the 160 end the lode is 18 in. wide, intersperced with ore, and leaving backs that will work at a moderate tribute. In the 145 end the lode is 2½ ft. wide, producing work of a good quality. In the 130 end there is no material alteration, the lode is still about 4 ft. wide, and yielding work of a promising nature. At north mine, the engine-shaft is sunk 10 fms. 5 ft. below the 70 fm. level; the ground is very hard west, and troublesome for sinking. In the 70 end, driving north, the lode is 4 ft. wide, composed of capel, mundic, and ore—saving work. Our last parcel of ore, computed 77 tons, was sold to the Tamar Smelting Company, at 17*l.* 17s. 6d. per ton.

TINCROFT.—Capt. P. Floyd (Nov. 20) reports—At Palmer's, on East Pool lode, in the shaft sinking below the 80 fm. level, the lode is 2½ ft. wide, worth 6*l.* per fm. for copper. In the 80 fm. level west the lode is worth 8*l.* per fm. for copper. The 70 fm. level west is at present poor, being disordered by small cross-courses. At Stainsby's shaft we have not yet communicated to the 16 fm. level, but are daily expecting to do so. At North Tincroft, the lode in the 100 fm. level east is worth 7*l.* per fm. for copper; the 100 fm. level west is worth 4*l.* per ton for copper. The 90 fm. level east is worth 12*l.* per fm. for copper; the 90 fm. level west is worth 8*l.* per fm. for copper. The 80 fm. level, east of Willoughby's shaft, is worth 9*l.* per fm. for tin; in the bottom of this level we have commenced sinking a winze, the lode in which has a very promising appearance for copper; we are also sinking a winze in the bottom of the 80 fm. level west, the lode in which is worth 10*l.* per fm. for copper. The rise in the back of the 142 fm. level, east of engine-shaft, on Highburrow lode, is communicated with Martin's east shaft; we have now commenced stoping the back of this level east and west, the stopes are worth 35*l.* per fm. for tin—we have now 22 fms. of high tin ground. In order to work this piece of ground to the best advantage, Martin's east shaftmen are put to cut a plat, &c., in the 132 fm. level; when this is done we intend driving east and west at this level. The stopes in the back of the 120 fm. level are worth 14*l.* per fm. for tin; the winze sinking in the bottom of this level is worth 20*l.* per fm. for tin. On Chapple's lode, in the 100 fm. level west, the lode is 3½ ft. wide, of a very promising nature for copper ore. The 90 fm. level west is worth 8*l.* per fm. for copper. In the 80 fm. level west the lode is worth 4*l.* per fm. for tin. Blight's shaft, on Dunkin's lode, is now sinking below the 84 fm. level; the lode is 4 ft. wide, with stones of copper ore. Dobree's lode, in the 58 fm. level, east of Chapple's shaft, is 1½ ft. wide, with stones of copper ore. At Wheal Providence, in the 33 fm. level, east of engine-shaft, the lode is 2 ft. wide, composed of spar and prian, with a very promising appearance for copper ore. On Wednesday next we anticipate sampling about 350 tons of copper ores, of better quality than usual.

TRELEIGH CONSOLS.—Capt. W. Symons (Nov. 18) reports—In the 113 cross-cut, north from Garden's, we are driving to cut the main lode. In the 100, west of ditto, lode 2 ft. wide, no ore to value. In the 90, east from east cross-cut, lode 2 ft. wide, worth 4*l.* per fm. In the winze, below the 90 east, lode 2 ft. wide, worth 14*l.* per fm. In the 70, west of ditto, lode 2 ft. wide, with occasional stones of ore. In the 60, west of ditto, lode 18 in. wide, with good stones of ore, not to value. In the 50, west of ditto, lode 2 ft. wide, with stones of ore only. Wheal Parent engine-shaft is sinking in the country, the ground much as usual. In the adit east, on the middle lode, lode from 10 to 12 in. wide, but little ore.

WEST WHEAL JEWEL.—Capt. Richard Johns (Nov. 20) reports—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode 18 in. wide, unproductive. In the 57 fm. level, east of Williams's cross-course, on the same lode, lode not taken down in the past week, when last taken down worth 5*l.* per fm.; in the 57 west, on same lode, lode 18 in. wide, worth 5*l.* per fm. In the 47 fm. level west, on the same lode, lode unproductive. In the rise in the back of the 57 fm. level, on the same lode, lode 2 ft. wide, worth 7*l.* per fm. In the deep adit, west of Hodges's cross-course, on the same lode, lode unproductive. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 2 ft. wide, producing little tin; in the deep adit, west of Quarry shaft, on the same lode, lode not taken down in the past week. The stopes in the back of the 12 fm. level, east of Pryor's winze, are working on tribute, worth 15*l.* per fm.; the stopes in the back of this level, west of Pryor's winze, are working on tribute, worth 30*l.* per fm.; the stopes in the bottom of this level are working on tribute, worth 20*l.* per fm.

WHIDDEN.—Capt. J. Kernick (Nov. 20) reports—Caunter's shaft has not been sunk deeper during the last week, as the shaftmen have been employed cutting a plat for the man engine, which is now working, and the sinking of the shaft resumed. The total expenses in this shaft, for the next month, will be 13*l.* per fm.; and to sink to the 10 fm. level, and to cross-cut to the great tin lode, will require four months, at a monthly cost of 32*l.*, including materials, whim-drawing, &c. In the shallow adit the lode continunes 2 ft. wide, and more kindly for tin; when this level is extended a few fathoms further east, it will be in a congenial strata, and will most likely drain the old miners' workings, which are about 100 fathoms long, and the bottom of them about 20 fms., nearly perpendicular above the present end; when they are drained, we shall be enabled to sink on the course of the eastern shoot of ore, to meet the shallow adit end. We have had to bring up this level a considerable way to underdrain these old workings, which are very extensive in the hill, and we confidently expect profitable results, particularly if we judge from the arches of ground left here and there in the western ground, which the old miners succeeded in unwatering to the deep adit. Mr. Murray's instructions regarding the dressing of the tin ore shall be attended to, so as to prevent our metal being evaporated, dissolved, or washed away as heretofore.

WILLIAM AND MARY WORTH.—Capt. W. Bice (Nov. 22) reports—We have completed clearing the footway shaft, and put in a footway to the shallow adit. There is no material alteration, since my last report, in the tributers' pitches; they continue to raise some good work. We cannot, however, calculate on any considerable monthly returns until the lode is further developed, after which we may reasonably expect there will be some profitable returns made.

WHEAL ANDERTON.—Captain James Carpenter (Nov. 22) reports—In prosecuting the 80 fm. level, on the course of the lode, I find a great improvement in its character, both east and west of the shaft; it has continued to be large, and producing more tin throughout than in any of the other levels, as will be shown by the returns effected the last quarter, being an excess to the preceding one about 240*l.* Having cut the slide east of the shaft, the lode has been rather disordered; but, from indications now presenting, I think we are nearing it again on the east side of the slide, as there is a floor of tin rising up in the end, I think the richest I ever saw in the mine—therefore I anticipate having a very good lode, as we get clear of the disordered ground. I have sunk 2 fms. under the 80 on the lode, which has every appearance of improvement in depth, but water being quick and disadvantageous in that mode of procedure, I thought it advisable to suspend the operation, and turn my attention to the sinking of the engine-shaft towards a 90 fm. level; there are 3 fms. sunk, and the ground is as favourable as we can expect; I do not apprehend it will cost more than 10*l.* 10s. per fm. on an average. The lode in the 70 west is large, containing a little tin, and I expect an improvement shortly, as the 50 fm. level, to the west of this point, showed strong indications to be good at a deeper level. We are stoping the back of the 70 fm. and 80 fm. levels on tribute; they are turning out a fair proportion of tin ore, as can be seen by the returns. I shipped 15½ tons of ore yesterday; the amount will be about 500*l.*, and every prospect of continuance, as we develope the lode in extension and depth; this leaves a profit of 200*l.* on the three months' cost (July, August, and September months).

WHEAL BENNY.—Captain John Tabb (Nov. 22) reports—In the 30 fm. level, at Ford shaft, we shall have to drive about 3 fms. from the present end to intersect Ford lode; in the south cross-cut we have not as yet cut the lode; but have intersected three branches, underlying south towards the main lode; this lode cannot be far from us. I have also commenced driving a cross-cut from Davy's shaft, in the 40 fm. level south, to intersect the Benny lode, by six men, and shall reach it a distance of about 28 fms.

WHEAL SARAH.—Captain James Spargo reports—The machinery in the old mine works well in forking the water, and the shaftmen are engaged in clearing up and securing the shaft about the 20 fm. level. We have, and are still, holeing some good work for lead; and, I am happy to state, that after the mine is cleared up, and men set properly to work, the mine will pay cost; in fact, if the lode continues as at present in driving, it will more than pay cost—that is, after including the expense of sinking the new shaft in the south part of the mine. The weather, the last few days, has been unfavourable for the masons in building the new wheel-pit; however, a few days dry weather will complete this, so that the carpenters will commence erecting the wheel, which is already on the mine. The ground in the west cross-cut is somewhat softer, and the elvan that we are driving through, shows that we are near the lode, which we expect to cut in a few days.

WHEAL TRESCOLL.—Capt. J. Webb (Nov. 23) reports—Since my last report, the B lode is much improved. I stated in my last, that it would pay the cost of the mine by itself, leaving out the other 20 lodes we have to cut; but the only thing now wanting to make a profit is more stamps, as we have sufficient tin in sight. We expect to cut the B lode, No. 2, next week, which I expect to be equally as good as the other lode, from the tin gone down below the adit. We are also driving south to cut the south lodes, and expect to cut the C lode in three weeks; there is also a fine course of tin gone below the adit on this lode. I expect to have, in the course of two months, a great many thousands of pounds worth of tin ground discovered, as our ground is very fair

for driving; and I need not hesitate to say, that this mine will make as good a tin mine as ever was in the county. We attached the condenser work to the engine last Saturday, and it is answering very well, and saving coals.

WHEAL VINCENT.—Capt J. Spargo reports—The men in the lobby to the wheel-pit are getting on satisfactorily, and intend next week to commence the wheel-pit. The carpenters and others are engaged in taking down the wheel and other material, at Wheal Martha, and the carriages are taking it on the mine. The shaftmen are getting on satisfactorily with the shaft, in which the ground is favourable; but the water is very fast—so much so that, instead of baling with tackle, we are obliged to have the whim, and shall use every effort to get the machinery at work, so as to save the expense of baling water, &c. The ground in the south cross-cut is just as last reported; but the water is getting more powerful, which, of course, is reasonable to expect, as we are coming near the lode. A correspondent of yours, in last week's Journal, stated this to be an extensive sett, and that it would require a good sum to prosecute the mine. It is true, it is an extensive sett; but as to the sum required to work the mine, I differ in opinion from that of your correspondent—if a tin lode in this district does not prove productive at the depth of 30 or 40 fathoms, I should think it not worthy of a further outlay; however, I am most happy to find that your correspondent's and my own opinions of the prospects here are favourable; and if there is anything to be said of indications at surfaces, this cannot fail from turning out a very profitable investment.

FOREIGN MINES.

ANGLO-MEXICAN MINES.—*Guanaxuato, Oct.* 6.—*Asuncion.*—Since the date of my last letter, we were beginning to gain a little, when a rush of water, arising from the tremendous and prolonged rains, threw us back completely. I had to seek horses, and put the other malacate to work, and have at length succeeded in getting the water down again, and look forward to a few more weeks' profit—but that is by no means the object.

Week ending—	Memoria.	Sale.	Profit.	Loss.
Sept. 2	$639 3 9	$1200 0 0	—	$ 39 3 9
„ 9	367 4 3	1170 5 0	$217 6 3	—
„ 16	322 5 2	915 1 0	134 7 3	—
„ 23	362 2 0	729 4 0	2 4 0	—
„ 30	494 4 9	576 0 0	—	204 4 9
	$ 4591 2 0	$ 355 1 6		$ 244 0 6
Less	244 0 6			
Total profit on the five weeks	$ 111 1 0			

300 cargas were sold in all that time, averaging $15 30 per carga—a very good price, indeed, in my opinion.

BOLANOS MINES.—*Extract from a letter dated Oct.* 6, *received Nov.* 24:—

MINE OF LORETO.—This, as I anticipated last month, has ended in disappointment, and I have advised the owners that the company will deliver them their mine, and I am only waiting their decision with respect to the inventory; I have in consequence, been moving the stores from San Clemente to the Bote, La Granga, and Celestina, and hope to finish the removal of everything by next week; I shall then try to make some arrangement with the owner of San Clemente, about the inventory of buildings, &c., and shall immediately curtail the general expenses, by discharging the different watchmen, porters, stablemen, &c., now employed in San Clemente; I shall also dispense with the services and salary of all but one clerk, who will be sufficient to keep the accounts.

MINE OF CELESTINA.—The extraction of ore in this mine has declined considerably, owing, in great part, to the scarcity of workmen, which I have suffered from, in common with neighbouring mines. The ore is, however, of very good quality, and I hope to gain a trifle when the general expenses are diminished. The departure of the conducta has again been postponed to the 10th inst.; I shall then remit you everything I can.

EL BOTE MINE.—Since my last communication to you, dated 4th of Sept., I beg to inform you, that the sinking in San Genaro shaft was discontinued on the 17th—the shaft being on that date 17⅞ varas below the bottom of Taylor's cross-cut. In Taylor's cross-cut 9¼ varas have been driven during the month; the ground being still favourable for driving, and as yet there is no appearance of water. In Victoria cross-cut, 8 varas were driven up to the 24th, when, no discovery having been made, it was then discontinued, and the level of Guadalupe east resumed; this level is being driven about 3 varas in width on the south wall of San Eligio vein, which is about 16 varas wide at this spot; and as, on a vein of the character of this, it is not unusual to meet with poor ground for some extent, and again come into fruits, I see no reason why we should not look forward with confidence to again meeting with ore ground. In Constancia cross-cut, we have driven through the vein of Nopensada, which is about 2 varas wide, but proved to be very poor; 10¾ varas have been driven during the month; and we have just cut another vein, about half a vara wide, but without fruits. It cannot now be long before we reach some of the other veins that had such promising appearances in the Esperanza cross-cut; and I hope that we shall here also cut ore. In Compania cross-cut but 2½ varas have been driven during the month, in consequence of having cut more water. In plan No. 1 west, the vein continues much the same as reported in my last. In Pozo de Guia, the vein has become much wider; and in all our workings, to the east of Pozo de Guia, the vein is wide; but the ore continues poor. The extraction of carga, up to the 23d, was very fair; but owing to a strike with the barreteros during last week, but few ores were taken out. Most of them, however, returned to their work again on the week following.

Sept. 30.—The unusually copious and constant rains have occasioned great inconvenience to the negociation, and have retarded the progress of the works to the exterior and interior to a considerable extent. The rains, which we considered so abundant last year, were nothing in comparison with the floods that have overwhelmed us in the present season. The consequence has been that the carriage of stone from the quarry has been repeatedly interrupted by the destruction of the road by the torrents; still a good deal of stone has been conveyed to the mine; and, as soon as the weather permits, sufficient carts can be procured to convey the remainder as fast as the masons may require it. Hitherto, the masons' work has also been impeded by the same cause; the boiler-house, however, is considerably advanced, and the foundations of the engine-house nearly finished, also the large yard for fuel, timber, &c.; and other works at San Genaro have made good progress. The rain has also interfered with the drainage, and frustrated every attempt to keep the water below the Compania cross-cut, which is much to be regretted, as the opening and exploring of ground at that level is important; enough has been seen, however, to lead us to expect a general improvement in the mine as it deepens. The Victoria cross-cut has been driven through the whole of the vein, without meeting ore, and now an end is driving eastward, in the same level, close to the southern wall of the vein; this is an important work, as it will examine a part of the hill hitherto unexplored. I do not think that any influx of water is to be apprehended from the levels of Constantia and Victoria, the ground at present is quite dry, and I have little doubt but that Taylor's cross-cut will also drain all water above its level, and leave the Compania dry. The greatest difficulty at present is the want of sufficient barreteros, for which reason the extraction of ores has not increased, as was expected, since communicating the workings with San Genaro shaft. The same complaint is general in the other mines of this district, and is commonly attributed to the low price of food, which enables the workman to sustain his family for a whole week upon the earnings of one or two days, and the same has always been observed in previous years of similar abundance.

Oct. 6.—I am sorry that I cannot advise you of any improvement in our planes since I last wrote to you, the best point being plan, No. 1, west. In fact, the average of the ores extracted during September are of a lower ley than those extracted in August; but, notwithstanding this, if once we could get the workmen to attend regularly at their labour, the extraction would immediately rise. Yesterday, the ores from plan No. 4, east, showed an improvement, and I am convinced that, if this continues, the same will happen in the whole of the planes, as you will observe by the map now sent that they are all at about the same level. I am happy to inform you, that quicksilver is daily lowering in price. Early last month I made a purchase of 83 bottles at $ 130, with two months' credit; since then it has lowered considerably, and yesterday some was offered as low as $ 110, with a short credit.

IMPERIAL BRAZILIAN MINES.—*Gongo Soco, Sept.* 13.—As our underground works at Bananal are rapidly extending, and as objects of interest occur in several parts of them, I have directed the captains to prepare tracings of their plans, to accompany my next half-yearly recapitulation. At Bananal, the necessity for expedition in sinking Wray's shaft beyond danger of injury from the rains, which we hope it will be in a week or two, has, for want of hands, compelled us to suspend prosecuting the Tamandua cross-cut for a short time; the delay, however, is not likely to be in the least degree prejudicial. Goldsmid's shaft has reached the adit level, and we are driving on a soft bed of jacotinga towards Walker's, whence our level to meet it proceeds slowly, as the rock it penetrates is a hard one. Walker's shaft is within a few feet of the 14 fm. level, and we are already preparing it for receiving our largest pumps; the water is so abundant that we sink but slowly. Our 7 fm. level from this shaft, towards Thomas's, goes on less rapidly than we could wish, but here also the ground is hard. We have made a few trials on the cross veins intersected by the adit between Thomas's and Hollingsworth's shafts, but none of them have yet shown anything promising. Hollingsworth's shaft, below the adit level, is penetrating a very hard formation; the additional trouble this costs us will, however be more than compensated by the greater firmness of the shaft. The six boxes of work from the new discovery at the adit level, south of Hollingsworth's, yielded but 4 lbs. of gold. Since that time we have been following the veins in which it was found backward parallel with the old workings and on our adit level, but nothing for the washing-house has been obtained, although specks of gold have been frequently seen; the whole, however, seems fair work for the stamps. We have done nothing on the big pump vein since my last. We are repairing the little old stamps so as to be ready as soon as the rains may supply motive-power for it; and we are removing our carpenters shop to a very convenient spot near the saw-mill, its present site being required for a whim to work on a new shaft, which the discovery at Hollingsworth's will soon render necessary. The commissioner's house is advancing rapidly, and within a month I hope to occupy a part of it, although it must be damp for some time to come.

Gold report from Bananal, from Sept 4 to Sept. 12	*Lbs.*	17	1	18 0
Ditto from Gongo, from ditto to ditto		3	0	7 0
Making together	*Lbs.*	20	2	5 0
Total raised from July 1—Bananal, 90 lbs. 3 oz. 18 dwts.; Gongo, 37	3	11	127	7 9 0

Extract from the Mining Captain's Report, dated Bananal, Sept. 11.

Since our last, on driving the deep adit southward in unexplored ground, at about 2½ fms. distant from the old workings, a bit of kindly ground was found on the western side of the level; and, on exploring it, several veins of quartz, manganese, mica, and sandy iron, were found, which, in a very short time, gave us 6 boxes of work for the washing-house, which yielded 4 lbs. of gold, rather less than we hoped from its appearance in the vein. We have risen on them, and find them rise east of the old shallow level; and, in order to prove them, we are now following them back by the side of the old deep level—our present adit. Spots of gold are occasionally seen, and all of them give such samples as to show they would serve fairly for stamps. This discovery, showing gold on veins parallel to the country, and therefore more likely to give lengthened bunches than short cross-veins, like that of Thomas's shaft, being so far from the previous bunch, and giving traces of gold over a tolerably large extent, seems to us the kindliest discovery we have yet made on the property, and adds greatly to its value.

NATIONAL BRAZILIAN MINES.—*Cocaes, Sept.* 12.—Until to-day, there had been nothing done on the entire ground at the sink; the people had been employed in clearing away the old timber, the unproductive stuff, &c., which had been collecting there for the last fortnight—consequently, the gold obtained from this point for the last 10 days is very little; the lode, however, at the lower part of the stope, is not at all unpromising; and we are daily expecting an improvement in the samples.

Cocaes produce, from 25th August to 4th Sept.	*Mks.*	5	0	6 17
Ditto, ditto, „ 5th Sept. to 14th ditto		3	0	6 51
Cuiaba ditto, „ 26th Aug. to 6th ditto		4	2	2 36

REAL DEL MONTE MINES.—*Extract from a letter, dated Mineral de Monte, Oct.* 10.—By the costs and returns for August, now forwarded, you will see that our loss in that month amounted to $7775, being $1700 more than I had led you to expect—a difference which has been, in part, caused by interest on loans, which I had not taken into account; but principally by regla patio, having, from continued bad weather, fallen short of reducing its proper quantity, and that beneficiated having given a most miserable result. Our loss in September I estimate at $8132 for the five weeks, and you will observe, that while other mines have been pretty steady, Santa Ynez has much improved, and Moran greatly fallen off.

South Regla Mines.—Our drainage here during the past month has been very steady; but the hardness of the ground in the San Augustin cross-cut has prevented our advancing so fast as I had hoped; it has, however, now penetrated 2 varas into the vein, containing eyes and strings of good ore, which, though an encouraging circumstance, is insufficient to be of any assistance to us. We have not, however, yet reached the upper wall, where the Biscaina generally makes its best ore, and ought not quite to despair of finding something to reward our perseverance at this point. It was not until the beginning of last week that this cross-cut effected the drainage of the Santa Teresa level, so as to allow of our sinking from that point, where the vein passed over was so promising; but it has now had one week's good trial, which threw out some quantity of massive ore, declared by all to exactly resemble that from San Enrique, which gave 12 mcs. and upwards per carga—judge, then, our disappointment to find that, when clean picked, it assayed only 38 mcs. per monton, or too poor for smelting. This result is truly discouraging, for though it may be hoped that, as we recede from the slide, the ley of the ore may improve; yet I fear that the perfectly exhausted state of our finance will not admit of further trial; and if in this and the following week we pass through the vein in the cross-cut without a really good discovery, and, in the meantime, that the ley of the ores from S. Teresa winze do not improve, there will be no remedy but to stop the drainage.

North Regla Mines.—The influx of water has been so great, that though both the Acosta engines have been working steadily, at the rate of 12 strokes per minute, we cannot keep down the water, which still continues to rise slowly. There has been no very important change either for better or worse in the produce; it is, in fact, the only mine that renders us any important assistance, and during September left an average profit of $1785 per week.

Moran Mine has been also very much troubled by the water, and the increased speed at which it has been necessary to drive the engine has caused many breakages, and I see no hopes of remedying this, until we can ease it by communicating the Desengano level, which will probably be effected in three or four weeks. At Santa Ynez, we have obtained a far better result than usual—not from any important improvement in the mine, but by great care in selecting the best points to work on.

UNITED MEXICAN MINES.—*Guanaxuato, Oct. 6th and 9th.*

Mine of Rayas.—I beg to enclose the usual monthly report by Mr. Parkman, which details the various operations now in progress, and the prospects held out by them. The general appearance of the workings has not varied since the date of my last letter; but the produce of ore from them has been materially checked by the principal point in rich ores, the pit of Santo Toribio, having been overflowed by water—the effect of the unusually severe and long rainy season now drawing to a close. To remove this obstacle effectually, it was my intention to have made use of a powerful hand-pump, placed at the head of the pit; but as the expense attending it would be considerable, while, on the other hand, the water was gradually being overcome by other more simple and less costly means. I have now given up that project, and hope that in a very few days the object in view will not only be effectively attained, but at a much smaller expense. The working of Santa Cecilia proceeds very slowly, owing to the hardness and defective formation of the rock; otherwise, the water in Santo Toribio might find a lower outlet thence; and another impediment to our general operations in this part of the mine has been a recent strike of the ore carriers, from the workings to the shaft, for a diminution of work or higher wages, which, however, is gradually being remedied, without any concession on either point. The sales of ores on joint account with Buscones have, on the the other hand, been more than doubled in the last three weeks, by extending operations to points alluded to in my last letter to the court, which had continued in abeyance for some time past, without any justifiable or known cause to my predecessor. The following statement shows the general results of produce and expenditure during the four weeks, ending the 30th Sept., as compared with those of the immediately-preceding like period, ending the 2d of the same month—viz.:—

Four weeks ending—	Picked Ores.	Half Sales.	Outlay.
Sept. 2	Cgs. 3220	$4938 5 0	$24,234 2 4
Ditto 30	2871	7842 3 0	25,214 4 4
Cargas	341 Decrease.	$2903 6 0 Increase.	980 2 0 Increase.

Operations have been further extended, by resuming work in various parts of San Cayetano, which, like the aforementioned points now in the hands of buscones, had been neglected. This extension, which will shortly be more conspicuous by the resumption of returns from the pit of Santo Toribio, will again turn the scale in favour of profits in the general results of the mine, from the present equalised state of returns and expenditure.

Oct. 9.—I have much pleasure in being able to add to my previous letter, that the pit of Santo Toribio having been cleared of the water in it, is now again in full operation, and will, consequently, give us not only an increase of produce, but of a richer kind than other points. The sale of ores, made since my report of the 6th inst., was $ 5645 5, and the general produce of the same week reached 1133 cargas of picked ores, which is not only a material improvement on the immediately preceding week, but leaves us a clear profit of $ 2500 to $ 3000 on the general operations, and, it is hoped, will continue for some time yet.

Oct. 6.—*Remittances.*—The Tampico conducta, alluded to in my last letter, has been detained here from want of troops, as escort to and from San Luis Potosi; but, as the necessary orders have arrived from Mexico, it will leave in a day or two. By this conveyance, I have ready packed off $ 80,000 for transmission to Messrs. Jolly and Co., who will be instructed to ship by first packet steamer, to the chairman of the court, the sum of $ 70,000 thereof, free of all charges whatever; and I have now to enclose herewith my first bill of exchange, at 60 days' sight, to the order of the chairman for 1000*l.*, and on Messrs. Cocks, Biddulph, and Co., which, at the current rate of Exchange in Mexico, of 42½d, and the equally current premium of 2 per cent. between Mexico and Guanaxuato, has cost $ 5760 to the debit of the capital supplied from England.

Oct. 9.—The Tampico conducta left hence yesterday, with the remittance to the court, mentioned in my preceding letter of the 6th, and which I trust will be shipped by the November packet. I. N. SHOOLBRED.

Report on the State of the Workings in the Mine of Rayas.

Oct. 2.—*La Purisma.*—In this, and other portions of the mine, hitherto worked by buscones, no change has occurred worth mention. The improvement in the sales is ascribable to the admission of buscones to portions of the mine from which they had been latterly excluded; this measure was in contemplation last month, and bids fair to keep up the sales for some time.

Santa Cecilia.—This work, owing to the hardness of the rock and abundance of water, has advanced but 4·23 varas during the month. The vein continues poor.

San Antonio.—Being worked by the buscones has improved, and promises still further improvements.

San Luis.—This work was continued 1·15 varas in the original direction, and then changed to the south-east, along a division of the vein cut through some eight varas back; in this direction, 5·46 varas have been driven. Besides its speculative object, this work, it is hoped, may intercept and concentrate a portion of the water at a higher level, which is now so troublesome in the "plan" of Santo Toribio.

Santo Toribio.—In these workings, there has been little variation during the month. The "contra cielos" continue the principal sources of produce. The advanced levels to the south-east are poor. The pozo of Santo Toribio, during the month, has been embarrassed by the water, which has been more abundant, owing to the heavy rains. Hand pumps are ready to be applied, if necessary; but it is hoped that the quantity will lessen now the rains are over. It will be readily inferred, that the water in this pozo has affected the produce for the time being; but this source of produce, it is hoped, will be soon available, and the work be continued downwards, when every step advanced presents a chance for improvement, and for opening new workings on each side. In San Cayetano, a variable number of barmen have been employed in obtaining ore from the roof and pillars, where sufficiently secured. A greater number were intended to have been employed; but there has been a scarcity of men, which will, in all probability, soon be remedied, as there are in the other mines a surplus of these workmen. The average number of barmen has been 60 by day and 47 by night—nearly all employed in Santo Toribio.—P. S. PARKMAN.

DEVON AND COURTENAY CONSOLS MINING COMPANY.

At a meeting of adventurers, held at the mine, on Thursday, the 16th inst., JAMES DIAMOND, Esq., in the chair,

The captain's report was read and adopted; and the accounts produced and examined, showing—Balance of July account, 196*l.* 8s. 2½d.; call made 12th Sept., on 788 shares, at 5s. per share, 197*l.*=393*l.* 8s. 2½d.—Sept. cost, as per vouchers, 132*l.* 4s. 11d.; Oct. ditto, 97*l.* 16s. 8d.—leaving balance in favour of company, when all calls are paid, 163*l.* 6s. 7½d.—Ninety-six shares were then forfeited to the joint stock of the company, for non-payment of calls, and the share register book being produced, it showed the total number of shares held by shareholders to be 653. A call of 5s. per share was made. The following report, from Capt. N. Seccombe, was read to the meeting:—

Nov. 14.—Since our last general meeting, we have driven the 40 fm. level, west on the gossan lode, 10 fms. 4 ft 6 in., on a lode varying in size from 2 to 3 ft. wide, composed of mundic, spar, and peach, with good branches and stones of ore in places. The ground has been generally favourable, and the indications, upon the whole, encouraging, so that I think, in continuing the level west, we shall at no great distance discover the ore so likely to be deposited under the gossan. In addition to this lode, there is another about 3 or 4 fms. south of the gossan lode, to intersect which a level is in course of driving 25 fms. west of the cross-course, in which there are two men employed, and will be completed in about a month from this time. In our 50 fm. level we have driven west on the gossan lode, 4 fm. 4 ft.; this lode is similar in size and composition to that in the 40 fm. level above, and also producing occasional stones of good yellow ore. In this same level, we have also driven east on the south lode 7 fms., the same being, on an average, 2 feet wide, and composed of mundic, capels, and spar, and good branches of ore in places, stones from which are to be seen on the surface. It is now the intention of the committee to continue the driving of the 40 fm. level west under the gossan, and to complete the intersection of the south lode in this level, and to prosecute the 30 fm. level east, in order to explore the ground east of the engine-shaft, in the deepest level. I would also beg to call your attention to the very recent discoveries made at Rix Hill Mine, in an adjoining sett; these workings are not more than about 80 fms from our ground, and the lode, from which they are now raising a large quantity of tin, extends several hundred fathoms in this sett; and, from the appearance of former workings on the surface, it is highly probable that great quantities of tin have been raised.

KIRKCUDBRIGHTSHIRE MINING COMPANY.

At the usual meeting of shareholders, held at the offices, Birchin-lane, on the 14th inst., a general statement of receipts and expenditure was submitted, showing—Balance against mine on 15th Aug., 46*7l.* 6s. 11d.; August cost, 415*l.* 16s. 1d.; September, 44*9l.* 3s. 8d.; October, 41*9l.* 8s.=1751*l.* 14s. 8d.—By call 15th Aug., 10s. per share, 41*3l.* 10s.; sale of 41 tons 1 cwt. lead ore, 10th Aug., 347*l.* 14s. 3d.; ditto 40 tons 17 cwts. ditto, 14th Sept., 351*l.* 11s. 8d.; ditto 41 tons 9 cwts. ditto, 16th Oct., 360*l.* 17s. 10d.—leaving balance against the mine, 278*l.* 1s. 4d.—The assets and liabilities were—Due purser, 9*l.* 2s. 5d.; merchants' bills, &c., 433*l.* 3s. 11d.=442*l.* 6s. 4d.—By calls to be received, 164*l.* 5s.—leaving balance against mine, as above, 278*l.* 1s. 4d. The following report, from Capts. R. Williams and E. Bawden, was read to the meeting:—

Nov. 11.—In presenting you again with our quarterly report, we will first state the number of fathoms spent in each level; then the nature of the lode, and the tribute ground working in the different levels of the mine. In the 50 end, west of Stewart's, we have driven 17 fms. 5 ft. 4 in.; on the north lode we have driven 2 ft. 8 in. west, when we holed to the south or main lode, 6 fms. 1 ft. 4 in. east, and 3 fms. on the caunter, making 29 fms. 3 ft. 4 in. at this level. We have sunk Keith's shaft from the 40 to the 50 fm. level, 10 fms. 2 ft., and driven 6 ft. each way in the bottom of this shaft; we have also sunk a winze from the 40 to the 50 west of Stewart's, and one from the 30 to the 40 west of Keith's. We have driven the 40 end, west of Keith's, 17 fms. 2 ft. 7 in., and the 30 end, west of the same, 8 fms. 4 ft. 8 in., when it was stopped. The 30 end, east of Stewart's, has been driven 17 fms. 3 ft., and the 20 end, east of the same, 8 fms. 1 ft. 6 in.; making, with 2 fms. 3 ft. driven on Tenotrie, and 3 fms. 4 ft. at Cuill—116 fms. 1 ft. 8 in. in all. At Tenotrie the lode gradually lost its kindly appearance as it entered the mountain; the rock became hard, and the lode small and unkindly. At Cuill, in driving south past the slide, we made no discovery whatever, and whether the lode is heaved to the right or to the left it is difficult to say, but I hope we shall be able to find it in the spring of the year. Stewart's shaft.—In driving the 50 west, on the main lode, it has seldom been without ore, although it has rarely been good enough to save; we have had a small branch in it this month, and there is now ore sprinkled over the end, but not enough to value. We have about 20 fms. to Keith's shaft, and we are in hopes that this will prove a productive piece of ground, as we had a good lode over it in the 40 fm. level. The north lode, as developed in the 50, seems to be a part of the main lode, split off from it in the level above, and it is not unlikely to fall in with it again in another 10 or 15 fms. sinking, where very probably it will enrich the lode, as it has impoverished it after leaving it in the 40. The caunter is (apparently) hove a considerable way east by this branch, whilst its productive part is united with it. We have one pitch working in the back of the 50 on the main lode, and two on the north lode, with one in the bottom of the level above, averaging 3*l.* 16s. 3d. per ton. The 40, west of Keith's, has been unproductive for some fathoms, but it went through a good course of ore about 15 fms. west of the shaft; and the 50 end, driving from Keith's, will come under this lode in two or three months driving. We had a large kindly lode in sinking Keith's from the 40, all the way, and yet had scarcely any lead from it, except about 4 tons from the waste, which made in lumps through the lode. We have four pitches working in the back of the 40 to the east, and one to the west of Keith's shaft, averaging 3*l.* 16s. per ton. The lode in the 30, west of Keith's, has split into branches and become poor, which induced us to stop it. We have three pitches working in the back, to the west of Keith's, in this level, also three in the back, and two in the bottom, between this shaft and Stewart's, averaging 3*l.* 14s. 3d. per ton. In the 30 fm. level, east of Stewart's, we drove about 16 fms. through a good orey lode, which, with the 6 fms. driven previously, makes 22 fms. of fine bearing ground; since which we have driven some fathoms through a barren rock, which I am in hopes we shall shortly get through, and have a productive lode again. We are glad to say that we have got through the barren rock in the 20 east, and the lode is looking strong and promising, with a fine branch of lead on the foot wall. In the rise, above the 30, we have a large lode; we hope to hole this to the 20 by the end of another month, when it will ventilate both levels, and open a good piece of tribute ground. The 50 end, east of Stewart's, will be a good trial for this long piece of orey ground in the 30 fm. level, and as it is dipping fast that way, we may expect it much sooner than we had it in the levels above; but, unless we discover the bearing rock again in the 30 end, we have a poor prospect for sinking Crouch's shaft—however, we cannot tell how soon we may discover it. We hope to get the new wheel to work soon, when we shall be better prepared for frost or dry weather than we are now; as we shall have one wheel to draw the stuff, and the other to pump the water, without the one interfering with the other. We have erected a house over the crusher, and a stable; and after putting the wheel to work, we intend covering some sheds on the floors.

WEST UNITED HILLS MINING COMPANY.

An adjourned meeting of adventurers was held at the Queen's Arms Hotel, Cheapside, on Monday, the 20th inst., to receive the report of the committee appointed on the 17th, to examine and report on the accounts produced by the purser. T. CAMPLIN, Esq., in the chair.

Before giving a report of the proceedings of the day, it is necessary to revert to the meeting held on the 17th inst., briefly noticed in our columns of last week. This becomes more essentially necessary, as in its absence it would be somewhat difficult to comprehend the resolutions passed at the adjourned meeting. On the former occasion, Mr. Ellery (the purser) laid on the table the cost-book and accounts of the company, whereupon the chairman complained, that no accounts had been furnished to the adventurers in London, in accordance with the resolutions passed at an antecedent meeting, and, consequently, the adventurers were kept in the dark; however, the purser being then present with the accounts, he would, doubtless, set matters all right, and, more particularly, show how the company stood with the bankers, to whom it appeared a balance was due. A meeting of adventurers was held at the offices of Mr. Paul Rabey, jun., in Parliament-street, on the 28th April last, when a resolution was passed, that a call of 3*l.* per share be made, for the purpose of purchasing an engine, at a cost not exceeding 300*l.*, and also to provide for the necessary expenditure attendant on the future working of the mine, whereupon Mr. ENGLISH submitted to the chairman the authority of an absent adventurer, to attend and watch the proceedings.

Mr. ELLERY (the purser), having explained the cause of his inability to attend the meeting, convened for the Tuesday preceding, laid upon the table the cost-book and vouchers. The accounts, as presented and passed at an antecedent meeting, were allowed.

The CHAIRMAN wished to offer one or two further observations on the proceedings of the company. He held 40 shares, on which he had anticipated the payment of the last call due of 120*l.*, expecting others would have done the same. He regretted, however, to say such had not been the case; Mr. Paul Rabey, jun., and others, had not paid their calls, and, consequently, the summer had been lost. As regarded the non-transmission of monthly accounts, he begged to state that such had not been forwarded to him, or the adventurers in London, as agreed upon. Things appeared to him to have been much neglected; the meeting appointed for the 30th June had not been convened by the purser; the cost-sheets had been transmitted, as it appeared, from the captain to Mr P. Rabey, jun., instead of coming through the purser, which had been withheld from the adventurers, and, altogether, the mine carried on in a loose manner. The calls had not been paid up to the present moment, and the engine, although purchased, had not been erected.

A discussion ensued as to the amount due to the bankers, which claim was repudiated by the chairman and body of adventurers, as not appearing in the

accounts. The banker's pass-book was laid on the table, from which it appeared that 191*l.* 19s. 7d. was due; while several adventurers present stated, that at the meeting held in April last, no notice was made of any balance being then due. It further appeared, that the accounts submitted by the purser that day did not agree with those laid before the meeting in September last. A report from the agents was then read. A very unpleasant discussion, as is too often the case, ensued, whereby it appeared, that the resident captain was a man of two masters, and wrote his reports accordingly. The purser appeared to be ignorant of the proceedings. Capt P. Rabey was too ill to attend work; he made reports, however, and Paul Rabey, jun., worked the shares, if he did not the mine—it appearing that he was party to the transfer of 400 shares (256 being the number of which the company is constituted), and had been the subscribing party to some 70 shares, or upwards, out of 95, or thereabouts, for we had only an opportunity at the meeting of making a hurried review.

Mr. Ellery, as purser, on referring to the accounts, stated, that if the arrears of 356*l.* were paid, such would not only be equal to pay all liabilities, but leave a balance of 44*l.* 0s. 11d. in hand. It is unnecessary to follow the proceeding of this meeting further, except as to the appointment of the chairman, and three other adventurers, with Mr. H. English, who were requested to examine the accounts, and report thereon at the adjourned meeting. On Monday, the 20th inst., the adjourned meeting accordingly took place, when the report of the committee was presented, whereby it appeared that the balance due to the bankers and merchants, placed as liabilities in the account, were due from the purser to the respective parties, and not from the adventurers, and that the financial position of the company was far more favourable than that contemplated—indeed, the amount in favour of the company, assuming all arrears received and liabilities discharged, would be 250*l.* It appeared, on reference to the cost-book, that the amount of expenditure on the mine since the appointment of the present purser, was 1666*l.* 12s. 11*d.*; while the calls, assuming all to be paid up, were 1942*l.* 15s.: leaving balance in favour of the company of 276*l.* 2s. 1d., after all demands had been liquidated by the purser, with the exception of 19*l.* 14s. 2d., due to the bankers for interest and commission. It was in the end resolved, that the meeting should be adjourned for one month; that the purser, in the interim, be requested to make arrangements for the settlement of the outstanding accounts, and furnish a balance-sheet, so that any balance due him should be discharged. There appeared to be no disposition to alter the arrangements, as regards the management at the mine, and the nature of operations (the engine remaining idle); and thanks having been voted to the committee for the report made, and to Mr. English for the services rendered by that gentleman, as also to the chairman, the meeting adjourned.

TREVISKEY AND BARRIER MINING COMPANY.

The account meeting for August and September was held at the mine, when the following statements were presented:—

Treviskey.—By ores sold, 27th July and 17th August (less 1-12th lord's dues, 137*l.* 7s. 10d.), 1511*l.* 7s.; materials charged, Barrier, Sept., 1848, 2*l.* 2s. 1d. =1513*l.* 9s. 1d.—To labour cost, Aug. and Sept., 563*l.* 13s. 7d.: tribute of ore, 263*l.* 4s. 11d.; merchants' bills, 284*l.* 19s. 11d.; Wheal Jewel adventurers' boiler, &c., 113*l.* 9s. 5d.; Tresevean adventurers' engine cost, &c., 124*l.* 18s. 1d.: showing profit of 163*l.* 3s. 2d.; add balance in hand end of July, 20*l.* 10s. 2d. =367*l.* 13s. 4d.—Deduct dividend, 3*l.* per share, declared Nov. 20, 360*l.*: leaves now in hand, 7*l.* 13s. 4d. The following report was presented:—

In Michael's shaft, sinking 1 fathom below the 260 fathom level, the lode is 3 feet big, producing stones of ore. In the 260, driving 7 fms. east of Michael's shaft, the lode is 3 ft. wide, but unproductive. In the 260, 7 fms. west of the shaft, the lode is large, and producing stones of ore. In the 248, driving 37 fms. east of the shaft, the lode is 2 feet wide, and will turn out 4 tons of good ore per fm. In the winze sinking below the 236, the lode is 2 ft. wide, and will turn out 2 tons of ore per fm. In the winze sinking below the 224, the lode is 2½ ft. big, and will turn out 2 tons of ore per fm. The 188 and 176 fm. levels are still poor. The lode in the 30 fm. level, driving west of Williams's old sump-shaft, is still unproductive. Williams's old sump-shaft is now nearly down to the 40 fm. level, and we intend to commence next month to drive north and south to cut each lode. We sampled, on Wednesday last, 361 tons of ore, and expect to raise 350 tons for November and December.

Barrier.—By ores sold, 27th July (less 1-14th lord's dues, 22*l.* 17s. 5d.), 297*l.* 7s. 4d.—To labour cost, August and September, 37*l.* 11s. 4d.; tribute of ore, 46*l.* 6d.; merchants' bills, &c., 13*l.* 7s. 4d.; Tresevean adventurers' engine cost, &c., 32*l.* 18s. 6d.; half-year's income tax, 13*l.* 7s. 6d.: showing profit of 153*l.* 16s. 8d; add balance in hand end of July, 31*l.* 3s. 2d=184*l.* 19s. 10d.—Deduct dividend of 1*l.* per share, declared Nov. 20, 120*l.*: leaves now in hand, 64*l.* 10s. 10d. The following report was presented:—

In the winze sinking 7½ fms. below the 248 fm. level, the lode is 3 ft. big, producing stones of ore. We shall raise very little ore here, as the ground is all worked away above the 248 fm. level.

WHEAL MARY ANN MINING COMPANY.

A general meeting of shareholders was held at the White Hart Inn, Liskeard, on Wednesday, the 22d inst.—Captain Peter Clymo, in the chair.—A statement of accounts was presented, showing—By sale of lead ores, computed 66 tons, weighed 65 tons 18 cwts. 3 qrs., at 17*l.* 2s. 6d. per ton, 1128*l.* 8s. 2d.—To August cost, 463*l.* 11s. 7d.; September ditto, 488*l.* 3s. 7d.=951*l.* 15s. 2d.—showing profit of 176*l.* 13s.—The accounts having been examined and passed, the following report, from Capt. P. Clymo, was read to the meeting:—

November 22.—The lode in the 50 fm. level, south of the boundary, is 2 ft. wide, and will produce half a ton of lead per fm; we have about 6 ft. more to drive to get under Barratt's shaft, when this is completed we shall immediately commence to rise against the shaft. The lode in the 40 fm. level, south of Barratt's shaft, is 4 ft. wide, composed of can and lead, and will produce 15 cwts. of lead per fm.; Pollard's shaft is sunk 5 ft. under the 40 fm. level, where the ground is favourable for sinking; the lode in the 40 fm. level, north of this shaft, is 1 ft. wide, and will produce 5 cwts. of lead per fathom; in the same level south it is 1½ ft. wide, composed of can and some lead. The lode in the 30 fm. level, south of the shaft, is 1 ft. wide, and will produce 7 cwts. of lead per fm. The winze, under the 15 fm. level, south of the shaft, is holed to the 30 fm. level. The stopes generally are looking well. In conclusion, I beg to say that our prospects were never so good as they are at present, as we have now five levels driving on the course of the lode; consequently we are opening ground much faster than we have been taking it away, as it is not convenient yet to put men to stope the back of the 40 fm. level, at Pollard's shaft, nor the back of the 50 fm. level, south of the boundary.

WHEAL TRELAWNY MINING COMPANY.

A general meeting of shareholders was held at the Fountain Inn, Liskeard, on Tuesday, the 21st inst.

Captain John Bryant in the chair.

The statement of accounts presented, showed—Sept. 18, by Tamar Smelting Company, for lead ores, 91 tons 20 cwts. 1 qr., at 15*l.* 15s. 6d. per ton, 1450*l.* 14s. 8d.; Oct. 21, Messrs. Sims, Willyams, and Co., for lead ores, 90 tons 17 cwts., at 15*l.* 17s. per ton, 1439*l.* 6s. 7d.; Wheal Trehane adventurers, for use of Trelawny engine, &c., two months, to 17th Oct., 16*l.* 10s. per fm.. 33*l.*; Wheal Mary Ann adventurers, compensation for driving the 52 fm. level to the southern boundary of the sett, 19*l.* 11s. = 2942*l.* 12s. 3d.—August cost, 1271*l.* 5s. 10d.; Sept. ditto, 1317*l.* 12s.; showing balance, 353*l.* 14s. 5d.; add end of July, 296*l.* 17s. 10d.—leaves 650*l.* 12s. 3d. to credit of next account.

The following report, from Capt. J. Bryant, was read to the meeting:—

Nov. 21.—Since our last general meeting we have driven the 72 fm. level cross-cut, east of Phillips's shaft, 8 fms. 2 ft. 6 in., this, with 8 ft. driven before, make 9 fms. 4 ft. 6 in.; where the lode was intersected, we have opened on it 10 ft., and find it to be about 3 ft. wide, composed of spar, mundic, can, and lead, worth 10*l.* per fm. The underlie from the 62 fm. level to the 72 is 5 inches in a fm. The 62 fm. level is extended in the past two months 8 fms. 1 ft. north, where the lode is from 4 to 5 ft. wide, and worth, on an average, 12*l.* per fm., the end is worth, at present, 18*l.* per fm.; in this level south we have opened 8 fms. 4 ft., where the ground will pay well for stoping; the end is worth at present 6*l.* per fm.: the stopes in the back of this level are yielding a fair quantity of ore. The 52 fm. level is extended north of Trelawny's shaft 8 fms., where the lode is worth, on an average, 9*l.* per fm.; the lode in the end is worth 7*l.* per fm.; the stopes in the back of this level, and to the south of Phillips's shaft, are looking well. Trelawny's shaft is sunk 8 fms. 4 ft. below the 52 fm. level; our progress here has been much slower than was anticipated, the ground being very hard; however, we hope and expect a change for the better shortly. The 42 fm. level is extended north 12 fms. 3 ft., since the last audit (and to Trehane boundary), where the average value of the lode is 9*l.* per fm.; the stopes in the back of this level are yielding a fair quantity of ore. The small branch referred to in my last report, discovered in the 22 fm. level cross-cut east, is not worth driving on; the ground in the end is clean compact killas. The tribute department is looking favourable. At the north mine, the 30 fm. level is extended north of the cross-course in the last two months 22 fms., where the lode is worth, on an average, 4*l.* per fm.; the lode in the end is 4 ft. wide, composed of spar, gossan, can, and lead, and worth 5*l.* per fm.; the ground is still easy for driving. I think there is not the least doubt of the lode being found equally as productive in depth in this part of the sett as it is in the south mine. October ores, computed 96 tons, were sold yesterday to J. T. Treffry, Esq., at 16*l.* 10s. 6d. per ton. In conclusion, I would remark, that although the two months' accounts now audited do not present so great a profit as I anticipated, from the last parcel of ores being short of our calculation, and our having heavy bills for timber, pitwork, &c.; yet, from the advanced price of the ores, our being supplied with pitwork, &c., for some months to come, together with our now being able with propriety to take away some of the ore standing in the north mine. I fully expect to present to you a much greater profit on the ensuing audit, and I hope a satisfactory dividend to the shareholders.

Consolidated Mines.—A meeting of adventurers was held at the account-house, on Wednesday, the 15th inst., when the accounts for September and October, of which the following is an abstract, were passed:—By balance from last account, 2019*l.* 6s. 8d.; ores sold, less dues, 6982*l.* 2s. 4d.=9001*l.* 9s.—To costs and merchants' bills, 7356*l.* 17s. 5d.: leaving a balance in favour of the adventurers of 1644*l.* 11s. 7d.

The Briton Ferry Works.—We are happy to find that the paragraph which we copied in our last from the *Cambrian*, relative to the stoppage of these works until March next, has been contradicted—there being no foundation for it.

The New Joint-Stock Bank.—In the *Journal* of the 11th inst., we announced the holding of a meeting of wealthy and mercantile gentlemen, connected with the city of London, who had assembled to discuss the propriety of establishing "the British Bank," to be founded on the Scotch system. Another preliminary meeting was held at the London Tavern on Wednesday, when the committee appointed at the last meeting reported progress, which was favourably received, and a list of directors will, we understand, be shortly published. Mr. M'Gregor, M.P. for Glasgow, presided.

THE COST-BOOK SYSTEM—LIABILITY OF ADVENTURERS.

Sir,—Observing your remarks on the liability of shareholders in working mines on the Cost-book Principle—that individual shareholders are liable for the whole debts of the concern—I was very much surprised, as I had always understood that shareholders were liable only to the extent of their proportion. My view of the case appears to be borne out by the observations of Mr. Serjeant Manning, at a meeting of the Society for Promoting the Amendment of the Law, held yesterday. In answer to Dr. M'Kenzie, who bore testimony to the satisfactory manner in which partnership *en commandite* had worked in various countries, Mr. Serjeant Manning said, "that the principle was already carried out in the mining districts, where shareholders in mines were only liable to the amount of their shares."—See *Daily News*, 14th November. If there be any doubt in this matter, it will cause the withdrawal from mining adventures of all men with anything to lose, among whom is your obedient servant,

London, Nov. 14. A London Adventurer

[Some remarks, touching on the question raised by our correspondent, will be found in another column.]

THE COPPER MINERS' COMPANY.

Sir,—It was with much surprise that I read your strictures, in last Saturday's Journal, on certain proceedings in Chancery I am carrying on against the Copper Miners' Company, and which you never would have inserted but in ignorance of the facts of the case.

So far from the bill having been dismissed by the Court below for want of equity, it is just the reverse—the present proceedings before the Lord Chancellor being an appeal by the defendants from the decision of Vice-Chancellor Knight Bruce. There is nothing in the bill which aims at depriving the ditors of "office or functions;" but, on the contrary, it prays that they shall *not* be allowed to divest themselves of power, by putting the affairs of the company "in trust," for the avowed purpose of winding up its affairs, and which would have the effect of withholding the long-promised accounts, which the shareholders are desirous of having laid before them, in order that they may investigate the causes which have led to the present embarrassment of the company. There is no allusion in the bill to "buying or selling," nor to borrowing or lending for legitimate purposes; but a charge is made against the directors, that they applied the moneys of the company, raised without authority, to speculations in railroads, and to loans amongst themselves, by which very heavy losses have been sustained, to the injury of the shareholders.

The charge against the Bank is, that the mortgage of the 13th Oct., 1847, was obtained by collusion and concealment; the facts being, that the company's property was mortgaged for 270,000*l.*, the Bank having only advanced 120,000*l.*, the remaining 150,000*l.* consisting of loan-notes of the company, having many years to run, created by the *secret* conversion of shares into loan-notes, a short time previous to their coming into the possession of the Bank, having been lodged with them as collateral security, by a mercantile firm, requiring a loan at the time.

My title as a shareholder consists in having paid the company *direct* 10,000*l.* for preference shares, nearly 18 months before the mortgage of the property to the Bank; and my being No. 2 on the register, is a proof that I lost no time in registering, the moment I heard of the resolution of the Court to that effect.

Until the Lord Chancellor has pronounced judgment, I think it advisable to abstain from entering into further particulars, but hope the present will suffice to induce you, as a matter of justice, to retract the insinuations made against me, and give publicity to this communication. W. H. Lord.

Putney, November 22.

[Some remarks on this communication will be found in another column.]

CASCADE MINE.

Sir,—In your report of the meeting of shareholders in this mine, held on the 16th inst., it would have been but fair towards me had you stated, in connection with Mr. Nicholas Truscott's allegation, that he "had reasons why the resolution passed at the preceding meeting (only two days before) should not be confirmed," my challenge to him to adduce those reasons; and further, upon his assigning one, and the only reason—namely, "that there was a balance due from me to the company"—that I immediately moved that the finance committee be requested to meet at the earliest possible day for the purpose of auditing the accounts. This motion was put and seconded, and Monday, the 20th, named for the committee to meet, which they accordingly did.

Oxford, November 23, 1848. T. H. Taunton.

[From the *Plymouth Journal*.]

Wheal Franco.—The 47 fm. level east and west continues much the same as at our last report; the stopes in the back of this level do not hold up, but the bottom of the level produces good work; the 47 end is 8 fms. behind the ore ground in the 32 fm. level. This will affect the sampling, but looks well for the 62 fm. level under this place. The lode in the 62 fm. level has not been cut, but as the top of the level is somewhat dryer it is daily expected.

East Crowndale.—The discovery ref rred to in our last has every appearance of being lasting, and it is more than probable that the enterprising adventurers will be amply rewarded for their perseverance. The tin sold produced 46*l.* per ton.

Plymouth Wheal Yeoland East.—This level is progressing favourably, but the end of the old men's working is not yet seen.

Wheal Russell is, we are informed, again set to work with vigour.

Sharp Tor sett has been taken up, and is about to be worked immediately. We are informed that a sett of the inclosed, as well as the Duchy lands, has been obtained, thus recovering the occasion of the abandonment by the late workers. The rocks of gossan found on the side of this Tor are immense.

North Wheal Friendship is being more vigorously worked.

Drake Walls.—The pitches, which have been suspended during the depressed standard, are again set.

Holditch.—A sett of this mine has, we understand, been obtained from certain trustees for the poor of Okehampton. It is about to be worked.

Cholwell Down and Kingset.—An arrangement has at length been effected, whereby the advantage of the Great Wheal Betsy adit (completed at an expense exceeding 20,000*l.*), has been secured to Messrs. Vatcher and others, and the lessees from Mr. Buller, and it is understood that these mines will shortly be resumed.

Birch Tor Mines.—It is in contemplation to drive a cross-cut north, to cut two lodes which have not been seen under the surface, and on which much work has been done by the ancients, and to complete the Old Vitifer adit. This would lay open a large quantity of tin ground, at a very inconsiderable cost, and would, in the opinion of experienced miners, well acquainted with the locality, be the means of returning much of the capital sunk in this concern. No additional machinery would be required to do this, and to sink the shaft 30 fms. on the lode.

Wheal Ash.—The large lode of mundic continues without change; from the general character of the lode, and analogy to other mines, it must be expected that the change here will be sudden.

Plymouth Wheal Yeoland.—The shaft on the new south lode is about 10 fms. under the surface, and 7 fms. under the slide; the lode in the bottom continues to be productive, and the stope in the western part of the level is rather more orey. The 34 fm. cross-cut is progressing favourably, the ground is a little softer, and it is expected that the lode will be cut within a fortnight.

Hawkmoor.—The discovery recently made continues to hold out the most flattering prospects to the *proprietors*; we can scarcely, from their limited number, use any other term.

Wheal Anderton.—This mine is very much improved; 16 tons of tin were shipped yesterday. The best quality realised 46*l.* per ton, and the returns for the last quarter are full 200*l.* beyond the cost of working.

The improved and improving standard, it will be seen from the above reports, has called the attention of capitalists to *home* mining operations—a result to be expected from the large number of paying dividend mines, notwithstanding the unparalleled depression of the standard, and it may be confidently calculated that large quantities of metal will be raised between the immense granite ranges of Heignston and Dartmoor.

A few shares in mines have changed hands in this neighbourhood since our last.

ACCIDENTS.

Charlestown United Mines.—As W. Crossman and W. and R. Truscott (father and son were tamping a hole, it unfortunately exploded. W. Truscott had his right arm broken in two places, and one finger cut off, his head very much bruised, his eyes burnt, and was otherwise severely injured; while the younger Truscott was severely cut about his head, but had no bones broken. Crossman was cut about his head, his eyes were burnt, and he was severely bruised in different parts of the body. The men, we are happy to say, are doing as well as can be expected.

Great Rough Tor Consols, St. Cleather.—John Mitchell was killed by the sudden falling of some earth, whilst removing some rubbish in the mine. The earth which fell buried him; and, on his being taken out, he was quite dead; it is supposed he was suffocated.

Delabole Slate Quarry.—Robert Kellow was killed by being struck on the head from the working of a steam-engine, the concussion fracturing his skull.

Wheal Ann.—As B. Honychurch was digging for lead, a quantity of rubbish suddenly fell, and killed him.

Rowley Regis.—J. Garbett was dreadfully injured by a fall of coal, while working in the British Iron Company's New Lion Colliery.

Brierley Hill.—T. Pargeter was killed by a fall of coal at Mr. J. Bates's pit, at Bromley.

Wolverhampton.—As S. Coulbourn was clearing away rubbish, to prop the roof, at the Chillington Colliery, a quantity of clod fell, and killed him.—As E. Taylor was removing an empty skip, a mass of coal suddenly fell from the roof of the pit, and killed him.

Dudley.—F. Farrell received dreadful injuries by a fall of coal, while loading a skip in a pit at Messrs. Bate and Robbins's Round's Green Colliery.

Coseley.—H. Wall, while working in the hollows of a pit at Dudley Port, was so dreadfully injured by a fall of roof, that he died in consequence. It was stated at the inquest, that deceased knew the roof was not safe (he had been told so more than once by a fellow-workman), and he ought not to have worked under it. He was not required to work there, but the more stone he got the more money he received.

Wednesbury.—As W. Abberley, aged 12 years, was working in a pit at Waterloo, a mass of coal fell, by which he was shockingly mangled, and subsequently died.

Llansamlet.—As Evan David and Thomas Thomas (in the employ of C. H. Smith, Esq.) were in the act of descending a coal-pit, the carriage descended at so tremendous a rate, that they were thrown out with such force as to cause their immediate death.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver coin to Rotterdam, 65,000 ounces; ditto to Hamburgh, 546; ditto to Havre, 2060; ditto to Port Adelaide, 350—Silver bars to Rotterdam, 187,592; ditto to Hamburgh, 30,572—Gold coin to Hamburgh, 20.

THE COAL TRADE.

Mr. R. C. Taylor, in his *Statistics of Coal*, gives some information respecting the increase of the coal trade in London, which will be read with interest. The amount of Welsh coal and culm brought to London has increased 145 per cent. in nine years. Scotch coal has, on the contrary, decreased 100 per cent., while the augmentation in English coal has been 26 per cent. The following curious information shows the rapid increase of the coal navy.—"Towards the commencement of the business, two ships were sufficient to supply the city with coals. In 1615, 400 sail were employed in the coal trade, one-half of which number supplied the demand of London. In 1703, 600 ships were employed in the London coal trade. In 1841, 6873 collier brigs were employed in the home and foreign coal trade of the northern coal-field only. In 1840, the tonnage of colliers in the River Thames amounted to 2,628,323 tons. In 1825, there were 6564 ships' cargoes entered for duty at the port of London. In 1846, 10,488 ships' cargoes, and, the previous years, 11,987. The largest quantity of coal sold in the London market, in one day, took place on the 21st of Oct., 1844. There were 282 cargoes, amounting to upwards of 80,000 tons; in all, 340 cargoes were at market, only 58 of which remained unsold."

As the average price of coal in London is rather above 20s. the ton, this one day's business represented 80,000*l.* sterling. Since 1845, however, the price of coals has diminished, and now averages about 16s.—The following table shows the annual production of coals in different coal-producing countries:—

Great Britain produces annually			31,500,000 tons.
Belgium	"	"	4,960,077 "
France	"	"	4,141,617 "
United States	"	"	4,400,000 "
Prussia	"	"	3,500,000 "
Austria	"	"	700,000 "

The estimated value of the coals raised in Great Britain is 9,500,000*l.* sterling; while that of Belgium, France, and the United States is each about 1,500,000*l.* The coal trade of the latter country is, however, yet in its infancy, there being 133,132 square miles of coal formation, while Great Britain possesses only 11,859 square miles. We are in possession of more recent and accurate statistics with reference to the South Wales coal-field than can have been presented to the author, and we are glad to bear testimony to the fulness and precision of those which he has collected. The annual consumption of coal in the Swansea, or South Wales, district is 4,350,000 tons, an estimate not widely different from that of the author, who makes it 4,800,000. Of this quantity, 1,500,000 tons are consumed in ironworks, and 550,000 tons in copper and tin works. At the present rate of consumption, the coal area, being taken at only one-eighth of its real extent, would furnish a supply for above 1400 years.

A question of much importance to the exporters of coal is the relative space which a ton of different kinds of coal takes up in the hold of a ship. The difference between two coals of equal value in other respects, is sometimes as great as 20 to 25 per cent. Mr. Taylor gives 78·945 lbs. as the weight of a cubic foot of English coal; this, however, must refer to one cubic foot of unbroken coal, the weight of the coal as supplied to the trade being never greater than 70 lbs., and more commonly only 50 lbs.

Contract for Coals.—This has been a busy week among coal contractors and proprietors. On Wednesday, the East India Company closed their contract for 5000 tons, to be delivered at Bombay; and on the 6th of December they will be ready to receive tenders for the supplying of 500 tons of coal at Point du Galle, in the Island of Ceylon, for the use of their steam-packets. On Thursday the Government also concluded its contract for the delivery of 1500 tons of Welsh coal, at Singapore, and 1000 tons of ditto at Valparaiso, for the use of her Majesty's steam vessels. There was a warm competition for these contracts. The contract for supplying the French Post-office department with coals at Calais, Marseilles, Ajaccio, Bastia, Malta, Athens, and Constantinople, to the amount of 35,178¾ tons English, for the use of their mail steam-packets, was to have come off on Monday last at Paris. We have not yet received the result of this extensive contract, which has excited great interest among the coal proprietors of France and Belgium. In our next number, no doubt, we shall be able to give it.

Real del Monte Mines.—We have been favoured with the following extracts from letters dated, Mexico, Oct. 14, on the subject of these mines, the usual correspondence from which will be found in another column:—"You will no doubt learn that there is at present a fair prospect of a decided improvement at Real del Monte. It is the opinion of a great many practical men, that if shareholders could be prevailed upon to subscribe sufficient capital to make an entirely new hacienda, of at least 200 "arrastres," to beneficiate the low ley ores (as is done at Fresnillo, and other mining districts in this country), the concern would shortly become a very lucrative one, and might still be carried on for the next 50 or 100 years. I have every reason to believe the concern is capable of being made one of the most profitable in this country, provided the large adit is completed as soon as soon as possible, and an entirely new hacienda of 200 to 300 "arrastres" immediately erected."

Sale of Mine Shares by Auction.—Some shares were submitted to sale by auction, at Truro, on Wednesday last, by Mr. Clyma, and realised higher prices than were expected. Wheal Henry fetched 41*l.* (independent of 1*l.* 5s. commission), and Wheal Friendly, 15*l.* per share, with 1*l.* each commission.

New Barometer.—On Monday evening a lecture was delivered at the Western Literary and Scientific Institution, by Mr. Malcolm, on a new invention, designated "The Aneroid Barometer." In the course of his lecture, which was illustrated by a specimen of the novel instrument, together with a variety of lucid experiments, Mr. Malcolm explained that in this barometer the use of mercury is entirely dispensed with, its peculiar principle being that it makes the air afford a register of its own variations. In shape it is like an ordinary chronometer, and its dimensions are 4 inches across the dial-plate, and 1½ inch in depth. The pressure of the atmosphere is rendered measureable by the production of a vacuum in a small copper box, hermetically sealed, and provided with counterbalancing springs, in order to prevent absolute collapse, and the exact degree of the air's pressure upon the box at any particular time is communicated to the index of the dial by an ingenious arrangement of levers.

Lashiesteel Bridge.—This most useful and interesting work is now completed, and has been open for passage for a fortnight past. It will be in the recollection of our readers, that last year, when well on to completion, the bridge fell. Various causes were assigned for the accident, but certainly the event has now proved that the cause or fault did not lie in the principle, as the present structure is reared on exactly the same principle and dimensions. We believe this bridge is unique in Scotland, or rather in Great Britain, for it is composed of only one span across the Tweed, with a stretch of 136 feet, the arch being done with ruble whinstone. There is a bridge of one span of greater stretch over the Dee at Chester (206 feet), but it is of dressed granite, and cost, besides, about 30,000*l.*, a sum altogether out of sight of the very moderate cost of the present one. From the present bridge being thus of unprecedented span for the material, very considerable anxiety and interest have been felt throughout the country and among professional men, over its progress, and a corresponding pleasure over its success. And now, notwithstanding the sapient doubts of some, there stands the bridge, with its strong and noble arch, equally a monument of architectural triumph, and an object of convenience and beauty in the picturesque scenery.—*Kelso Mail.*

NEW PATENTS.

T. Masters, Regent-street, Middlesex, for certain improvements in apparatus for making aerated waters, and in apparatus for charging bottles and other vessels with gaseous fluid; also improvements in bottles and other vessels and apparatus for drawing off liquids, in securing corks, or stoppers, in bottles or other vessels, and in taps or vent-pegs.

T. Cullen, London, gentleman, for improvements in apparatus for steering ships and other vessels.

J. Juckes, Rosamond Cottage, Fulham, for improvements in furnaces and fire-places.

A. M'Dougal, Langsight, Manchester, chemist, and H. Rawson, of the same place, agent, for improvements in the manufacture of sulphuric acid, nitric acid, oxalic acid, chlorine, and sulphur.

J. O. York, 24, Rue de la Madeline, Paris, engineer, for improvements in the manufacture of metallic tubes.

W. H. Clement, Philadelphia, United States of America, gentleman, for certain improvements in the manufacture of sugar, part of which improvements is applicable to evaporation generally, also improved apparatus for preparing the cane thrash to be used as a fuel.

Henry Newson, Smethwick, near Birmingham, for improvement or improvements in trusses.

E. Bell, Esq., London, for certain improvements in aerial machines and machinery in connection with the buoyant power produced by gaseous matter.

C. Schiele, Manchester, mechanician, for certain improvements in the construction of cocks or valves, which improvements are also applicable for reducing the friction of axles, journals, bearings, or other rubbing surfaces in machinery in general.

P. Llewellin, Bristol, Gloucester, brass and copper manufacturer, and J. Hemmans, of the same place, brass-founder, for improvements in the manufacture of cocks or valves for drawing off liquids.

H. Archer, Great George-street, Westminster, gentleman, for improvements in facilitating the division of sheets or pieces of paper, parchment, or other similar substances.

F. Bramwell, Millwall, Poplar, engineer, and S. C. Homersham, Adelphi, gentleman, for improvements in feeding furnaces with fuel.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

W. Broughton, South-street, Finsbury, universal stove.

H. Austin, Gwydir House, drain pipe, with single half-socket joint.

G. Perrot Hive Iron-Works, Cork, portable capstan.

J. L. Hancock, Goswell Mews, London, self-acting hose-pipe reel.

W. Kirkwood, Edinburgh, water-closet.

Bryden and Sons, Edinburgh, safety receiving-box for letters and parcels.

C. Whitton, Sixall Heath, Stafford, Remington and Whitton's farmers' and graziers portable mill.—*Mechanics' Magazine*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 188 9	Belgian, 2½ per Cent., 40½
3 per Cent. Reduced Ann., 86 ½	Dutch, 2½ per Cent., 47⅞ ½
3 per Cent. Consols Ann., 87¾ ⅞	Brazilian, 5 per Cent., 73½
3½ per Cent. Ann., 86⅞ ⅞ ¾	Chilian, 6 per Cent., 84½
Long Annuities, 8¾	Mexican 5 per Cent., 21⅞ ¼
India Stock, 10½ per Cent., 234	Russian, 5 per Cent., 100 ½ 100
3 per Cent. Consols for Acct, 87⅞ ¾ ⅞	Spanish, 5 per Cent, 11⅞ 12
Exchequer Bills, 1000*l.* 2d. 38 pm.	Ditto 3 per Cent., 25

MINES.—A fair proportion of business has been transacted in the mining share market during the week. Inquiries are being made for South Wheal Frances, Trelawny, South Wheal Basset, West Caradon, and several other mines, in which business has been done, more or less.

In Devon Great Consols there has been several transactions during the week. The directors, at their weekly board on Wednesday, declared a dividend of 5*l.* per 1024th share for the months of July and August workings, thereby making the *sixth* dividend, or 30,720*l.* paid to the shareholders during the year, notwithstanding the depressed standard for copper ore. The balance in hand, after payment of the dividend, appears to be about 14,357*l.*, being nearly 700*l.* above the credit of the previous balance. The mines are represented to be in a position of returning 1500 tons per month for a considerable period, from the levels already developed, or laid open.

Shares in the following mines have changed hands since our last:—Devon Great Consols, Gonamena, West Caradon, Trehane, Bedford United, Tamar Consols, East Tamar, Mary Ann, Trelawny, South Wheal Basset, South Tolgus, West Caradon, Kingsett and Bedford, South Wheal Frances, South Wales Mining Company, Cwm Erfin, Camborne Consols, Tremayne, &c.

The accounts of the Consolidated Mines show a balance in favour, on September and October working, of 1644*l.* 11s. 7d.

The usual bi-monthly meeting of Treviskey and Barrier was held on Monday, the 20th, when a dividend of 3*l.* per 120th share in the former, and 1*l.* per 120th share in Barrier. Treviskey made a profit of 163*l.* 3s. 2d., and Barrier 153*l.* 16s. 8d., on the two months' working, a balance of 72*l.* 13s. 2d. carried to the credit of the next account of the united mines. There is nothing new, or important in the agent's report—both mines are without any material improvement since last meeting.

Wheal Trelawny adventurers held their two-monthly meeting on Tuesday last, for auditing the accounts for August and September. The statement of accounts show a balance of 650*l.* 12s. 3d. carried to the credit of the company, and a profit of 353*l.* 14s. 5d. made on the two months' working; silver-lead ores raised during that time amount to 2890*l.* 1s. 3d., and October ores were sold on Monday last, computed 96 tons, at 16*l.* 10s. 6d. per ton. The agent's report is highly favourable, and the mine may be now reckoned among the dividend-paying mines.

Mary Ann two-monthly meeting of shareholders was held on the 22d inst.; the balance-sheet presented shows a balance of 218*l.* 14s. 9d. carried to the credit of next account; a profit of 176s. 13s. was made on the two months' working. The captain's report is generally of a satisfactory and encouraging character.

Wheal Trehane account meeting was held at Liskeard, on Thursday; but we have not yet received the usual particulars.

We learn that a very promising lode has been discovered in East Wheal Josiah, a sett immediately adjoining Devon Great Consols on the east, and formerly known as Wheal Elizabeth, and afterwards as Wheal Crease.

Devon and Courtenay Consols two-monthly meeting was held on the 16th inst., when a call of 5s. per share was made. The agent, in his reports, directs particular attention to a lode which runs through their sett (and is now highly productive for tin), at Rix Hill, a distance of about 80 fms. from their boundary, and which has been greatly worked on the back at former periods.

Kirkcudbright shareholders held a meeting on the 14th—a lengthy report of the captains appears in another column.

We have seen some splendid stones of copper ore at the office of Camborne Consols Mine, recently received from that mine. We understand that the obstacles which had presented themselves have been removed, and that the mine will be in a returning position at once. Some business has been done in these shares this week.

We noticed, on the 11th inst., that remittances had been made for the payment of the dividends on the Portuguese bonds, due in June, 1847. We now learn that authority has been received for advertising payment in Feb. next.

We have had an arrival from South Australia, but the intelligence has been anticipated in the reports published in the Journal of the 4th November.

By the Indian mail, advices have reached us of the improved position of the metal markets of Bombay, Calcutta, and Canton, and that the stocks on hand generally were light.

In foreign mines, there have been several transactions in St. John del Rey' Imperial Brazilian, and United Mexican, and business has also been done in Bolanos and Asturian.

Dispatches were received, on Thursday, by the Imperial Brazilian Mining Association, National Brazilian, and United Mexican Companies.

The Imperial Brazilian letters are to the 13th Sept., and advises the raisings of gold for the eight days ending 12th Sept., at Gongo Soco, 3 lbs. 0 ozs. 7 dwts., and Bananal, 17 lbs. 1 oz. 18 dwts.; the total quantity of gold raised from the two mines, from the 1st of July, amounts to 127 lbs. 7 ozs. 9 dwts. The operations have been continued in the adit level, south of Hollingsworth's shaft, on the veins, which had proved productive; and, although no valuable discovery has been made since, the whole of the work raised is considered fair work for the stamps.

The National Brazilian advices are to the 12th Sept., and represent the produce from Cocaes, from 25th Aug. to the 14th Sept., at mcs. 8 1 4 68, and from Cuiaba at mcs. 4 2 2 36, from the 26th Aug. to 6th Sept. The mining report conveys little important information, more than the daily expectation of improving their samplings.

The West Indian Mail Steam Company's ship, *Severn*, arrived at Southampton on Thursday, having $684,436 on merchants' account, 704 ozs. gold, and 477*l.* in British coin.

HULL, THURSDAY.—During the past week the share market has evinced tolerable firmness, but transactions are almost solely confined to *bonâ fide* purchases for investment, and these chiefly on paid up stock. The statements lately issued by the various leading companies are still much discussed, and public opinion is far from being perfectly satisfied with the results as exhibited.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1848	1847
Belfast and Ballymena	37¾	—	19½	—	£382	—
Birkenhead, Lancashire, & Chesh.	19	997,284	37	5 *p.c.**	687	692
Caledonian	141	3,993,732	18½	—	4529	—
Chester and Holyhead	84	3,014,602	20	4	1126	—
Dublin and Drogheda	35½	774,875	28	—	673	778
Dublin and Kingstown	7½	395,915	—	6	655	676
Dundee, Perth, & Aberdeen Junc.	47½	544,554	25¾	8	932	695
East Anglian (Lynn to Ely)	67½	1,167,104	4¾	—	717	—
East Lancashire	44	1,733,915	15½	5	1523	937
Eastern Counties and Norfolk	307	10,364,505	11¾	4	13125	12350
Eastern Union	50½	1,522,232	20	—	1227	1126
Edinburgh and Glasgow	57¾	2,556,889	39½	6	3402	3383
Edinburgh and Northern	78	1,722,213	15¼	4*	2003	782
Glasgow, Paisley, and Ayr	102½	2,286,353	65	4	2408	2611
Glasgow, Paisley, & Greenock	22½	848,328	14¾	4	884	1024
Gt. Southern & Western, Ireland	131	2,844,897	22½	4*	3137	1767
Great Western	290¾	11,311,069	76½	7	17625	16987
Kendal and Windermere	10½	174,600	23	—	113	127
Lancaster and Carlisle	70	1,476,102	47	4	2179	1353
Lancashire and Yorkshire	172½	8,242,628	57-8	6	10128	8937
London and North Western	435	22,835,120	116½	7	38217	38209
London and Blackwall	4	1,299,675	4½	1-12	564	752
London, Brighton, & South Coast	162½	6,284,812	27¾	2½	7683	7769
London and South-Western	215	7,139,733	37½	6	8360	7199
Londonderry and Enniskillen	14½	154,643	16	—	—	112
Manchester, Sheffield, & Lincolnsh.	58	4,651,093	40¾	5	2739	2114
Maryport and Carlisle	28	443,974	40	—	—	652
Midland Company	463½	13,254,006	76	6	19691	19233
Midland Great Western (Irish)	50	725,332	17	4*	1302	1004
North British	99	3,163,450	15	5	2576	2289
Scottish Central	45½	1,245,496	25½	—	918	—
Shrewsbury and Chester	23	780,272	11½	5	1183	552
South Devon	50½	1,789,351	12	—	1326	713
South-Eastern	165½	7,389,322	21½	6¾	7415	8470
Taff Vale	38	820,056	125	6½	1993	1833
Ulster	36	684,684	45¾	—	767	770
Whitehaven Junction	12	150,879	9¾	3	204	224
York, Newcastle, & Berwick	270	5,038,255	25½	8	13473	11056
York and North Midland	255	4,179,309	48	8	7019	7178
FOREIGN RAILWAYS.						
Amiens and Boulogne	76½	573,338	5⅞	4	1535	—
Antwerp to Ghent (monthly)	31	—	—	—	—	—
Marseilles to Avignon	71½	—	8½	—	—	—
Dutch Rhenish	57½	—	½	—	888	938
Northern of France	211	2,000,000	5⅞	4	13585	13854
Orleans to Bourges (Central)	107½	—	—	—	3276	2554
Orleans to Tours	72	600,000	32½	6	3200	3810
Paris and Orleans	82	2,011,720	25½	12½	8326	8468
Paris and Rouen	85	2,082,916	15½	11½	5334	6863
Rouen and Havre	59½	—	7½	—	2128	2739
Strasburgh and Basle (monthly)	88	—	6	1½	—	—
West Flanders (ditto)	—	—	1½	3	1120	1615

* nterest.—Total for last week, £187,686, being an increase of £27,206 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	—
512	Albert Consols	1	2½
1024	Alfred Consols	8⅜	5
1000	Antimony and Silver-Lead Mining & Smelting	5	5½
1024	Ashburton United Mines	8⅞	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6½
1000	Barristown	5½	1¼
4000	Bedford	2½	2½
1244	Birch Tor Tin Mine	9¼	1½
8000	Blaenavon	50	17½
100	Botallack	182	60
120	Brewer	5	7
10000	British Iron, New, regis.	10	13
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
1000	Callington	19	15
1000	Camborne Consols	5	5
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	2
256	Caradon Mines	22½	10
256	Caradon United	24	5
256	Caradon Wh. Hooper	21	8
1000	Carn Brea	15	100
3000	Carthew Consols	1½	5
2048	Cascade	1	—
112	Charlestown	220	60
512	Coatlithe Hill	½	1
500	Comblawn	5½	3
128	Comfort	45	35
256	Condurrow	20	37½
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3½	4½
6500	Cornish Mining Co.	2	2¾-⅛
20000	Cornwall New Mining	1	1
1000	Copper Bottom	1½	6½
1024	Cosheen	4½	20
212	Craddock Moor	23½	5
128	Creeg Braws	120	100
500	Cubert Mine	12½	—
1000	Cwm Erfin	2½	3
300	D. Prior & Buckfastleigh	—	—
7100	Derwent	8½	5
845	Devon & Courtenay Con.	7¾	¾
1024	Devon Great Consols	1	220
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	5	4
10000	Durham County Coal	45	9
3000	Dyingwm	10	12½
512	East Alvenney	5½	12½
112	East Caradon	47	47
2048	East Crowndale	5¼	2½
512	East Combe Silver-Lead	6½	6½
128	East Pool	15	30
9000	East Tamar Consols	¾	¾
—	East Wheal Albert	1	3
94	East Wheal Crofty	125	250
1024	East Wheal Fortune	2	3
128	East Wheal Rose	50	650
—	East of Scotland Iron Co.	5	1⅝
123	East Wheal Seton	14	10
256	Exmoor Wh. Eliza	9	9
512	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3½
6400	Gadair	2	2
4000	Gen. Mining Co. for Irel.	1⅛	1¼
2048	Goldscope Mine	2	2
256	Gonamena	44½	15
128	Goonvrea	4	2
100	Great Consols	1000	250
1600	Great Michell Consols	1½	½
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	18½	11
1200	Growa Slate Company	5	5
256	Gwinear Consols	7	1
6000	Heignston Down Con.	½	2½
256	Herodsfoot	18	25
10000	Hibernian	12½	1⅝
239	Hobb's Hill	6	1½
1000	Holmbush	22	1½
827	Kirkcudbrightshire	8½	2
2048	Lamheroe Wh. Maria	13	2
252	Lanarth Consols	—	7½
128	Lelant Consols	90	60
160	Levant	—	100
1000	Lewis	16	7
1000	Llwyn Malees	7	7
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	19	14
6000	Marke Valley	10	2
5000	Mendip Hills	3	1
5000	Merionethshire Slate Co.	1½	2
128	Metha	34	140
20000	Mining Co. of Ireland	7	4½
256	New East Crowndale	3¾	2½
128	North Fowey Consols	37	10
100	North Pool	45	500
140	North Roskear	5½	165
262	North Wh. Leisure	1½	2
15000	Northern Coal Co.	23	2
128	Par Consols	—	1009
8000	Pennant & Craigwen	2	2½
100	Penrhiw	30	65
1024	Penzance Consols	16*s* 3*d.*	2
512	Plymouth Wh. Yeoland	6½	15
200	Polsaith Consols	5½	4½
2500	Rhoswiddol & Bacheidon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	Rosewarva Mines	—	12
2048	Runnaford Coombe Tin	¾	10
128	South Caradon	10	300
1100	South Dolcoath	4	5
256	Sth. Friendsh. Wh. Ann	20	4
256	South Molton	5	10
256	South Tolgus	10	55
256	South Trelawny	28½	5
2000	South Wales Mining Co.	½	2½
128	South Wheal Basset	110	130
256	South Wh. Betsey	2½	12½
124	South Wh. Frances	160	230
1000	South Wh. Maria	2½	1½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	18
9600	Tamar Consols	3	5
1024	Tavy Consols	4	4
6000	Tincroft	7	4½
1000	Tin Vale	2½	3½
58	Tokenbury	170	10
256	Tollpetherwin	3½	5
256	Tregordan	2	10
256	Trehane	2½	27
5000	Treleigh Consols	6	2
2000	Trenance	3	—
96	Tresavean	10	150
120	Trethellan	5	19
120	Treviskey and Barrier	130	84
288	Trevean	1½	5
100	United Mines	300	350
256	Wellington Mines	25	10
256	West Caradon	20	90
512	West Fowey Consols	40	12
256	West Providence	9	15
200	West Seton	40	210
—	West of Scotland Iron Co.	240	90
120	West Trethellan	5	30
256	West United Hills	—	4½
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	1½
256	West Wheal Tolgus	21¼	6
256	West Wheal Treasury	19	8
1024	Whiddon Mines	4¾	4¾
5200	Wicklow Copper	5	8⅞
107	Wheal Adams	79	30
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
240	Wheal Anderton	23	20
128	Wheal Ann	—	50¼
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	20
256	Wheal Benny	14½	2
256	Wheal Blencowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	10
268	Wheal Courtenay	12½	15
256	Wheal Fortescue	6½	3
388	Wheal Franco	27	18
128	Wheal Harriet	45	—
100	Wheal Henry	—	42
1024	Wheal Lawrence	3	3
112	Wheal Margaret	79	250
512	Wheal Mary Ann	5	14½
208	Wheal Mary Consols	60½	8
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	5
90	Wheal Seton	214	700
180	Wheal Sisters	35½	5
512	Wheal Sophia	3½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	4	6
260	Wheal Trelawny	7½	58
256	Wh. Tremaine (St. Ervan)	9½	2½
1024	Wheal Tremayne	9½	2½-3
92	Wheal Tryphena	140	265
1000	Wheal Vincent	1½	6
256	Wheal Vlow (Perranz.)	¾	¾
184	Wheal Vyvyan	—	60
250	Wheal Williams	28½	8
1024	William & Mary Worth	2	2½

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	2
15000	Asturian Mining Co.	13	2½-¼-⅜
20000	Australian	2½	4-3½-¾
10000	Anglo-Mexican Co.	100	¼
12374	Ditto Subscription	25	1½
6000	Barossa Range	½	1½
3000	Bolanos	150	2½
2000	Ditto Scrip	15	3½
12000	Brazilian Imperial	23	9
10000	Cobre Copper Co.	40	13
10000	Copiapo Mining Co.	14	2½
10000	General Mining Ass'n.	20	10
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	8	½
5000	National Brazilian	30	3½-5½
104000	N. Brit. Australasian	1	¼
7000	Royal Santiago	10	4
11000	St. John del Rey	15	11
13174	United Mexican ... Av.	28¼	3½-3¾

, *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

GAS-LIGHT AND COKE COMPANIES.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
5,000	British (London)	£18	£1*	£12
5,000	Ditto (country)	19	1⅞*	22 23
1,000	City of London	100	10	245
1,000	Ditto New	100	10	250
4,000	Equitable	50	5	36
10,000	European	20	1½	18
12,000	Gas-Light and Coke Chartered Co.	50	6	55 56
6,000	Ditto New	10	6*	11 11½
9,000	General United Gas-Light Company	50	2	12½
10,000	Imperial	50	6	68
46,400*l.*	Ditto Debentures	100	4	100
8,000	Imperial Continental	39½	4½*	54 56
7,000	Ditto New	28	4½*	61
54,500*l.*	Ditto Debentures	100	5	100 102
2,000	Independent	40	6	64
3,000	London	50	6	—
3,000	Ditto	50	5	—
9,000	Phœnix, or South London	43	5	30
1,000	Ratcliff	80	5	72
4,500	South Metropolitan	25	6	30 3

MISCELLANEOUS COMPANIES.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
10,000	Assam Tea Company	£20	—	£ 3
1,080	Auction Mart	—	£ ¾	28
10,000	Australian Agricultural	30	1	22
10,000	Australian Trust	35	—	30
8,000	British Alkali	25	4	16¾
10,000	British American Land	35½	—	14
8,600	British Rock and Patent Salt	35	18	11
8,915	Canada	32½	6	27
—	City Bonds (Navigation)	—	3½	82
1,800	Corn Exchange	37½	1½	26½
5,000	Droitwich Patent Salt	25	¾*	11
2,700	Equitable Reversionary	95	4½	92
—	General Reversionary Interest	100	5	100 105
0,000	General Steam Navigation	14	1⅞*	54½
—	Hudson's Bay Stock	—	10	230 240
2,100	Hungerford Market	100	¾	45
1,500	London Commercial Sale Rooms	—	1½	31 32
8,000	London Reversionary	22	—	24¾
300	Margate Pier	—	10	196
10,000	Mexican and South American	7	—	3½ 4
20,000	New Brunswick	75	—	—
11,600	Peninsular and Oriental Steam	50	7	55½
6,600	Ditto	40	—	—
5,387	Reversionary Interest Society	100	4½*	90
—	Royal Mail Steam	—	5½	44½
8,000	South Australian	25	6	90
20,000	Upper Canada	100	5	93 94
20,000	Ditto	—	5	93 94
10,000	Van Diemen's Land	20	—	4

* Those marked with an asterisk (*) are dividend per share.

JOINT-STOCK BANKS.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
22,500	Australasia	£40	£3	£14½
20,000	British North American	50	6	38½
20,000	Colonial	25	5	4½
—	Commercial of London	20	6	18¾
4,000	Ionian State	25	6	24½ 25
60,000	London Joint-Stock	10	6	14½
30,000	London and Westminster	20	6	20½
10,000	National Provincial of England	35	5	33
20,000	National of Ireland	22½	5	17¾
20,000	Provincial of Ireland	25	8	38
4,000	Ditto New	10	8	19½
	South Australia	22½	—	23
20,000	Union of Australia	25	6	23
10,000	Ditto New	2½	6	2½ 2½
60,000	Union of London	16	6	10

LATEST CURRENT PRICES OF METALS.

LONDON, NOVEMBER 24, 1848.

	£ s. £ s. d.		£ s. £ s. d.
IRON—Bar *a*, Wales ..*ton*	4 15 – 5 5 0	COPPER—Ordin. sheets, *lb.*	0 0 – 0 0 9
,, ..London	0 0 – 6 5 0	Old	0 0 – 0 0 7½
Nail rods ,,	0 0 – 7 0 0	YELLOW METAL SHEATHING	0 0 – 0 0 7½
Hoops	0 0 – 8 15 0	TIN—Com. blocks *g* ..*cwt.*	0 0 – 3 19 0
Sheets, single	0 0 – 9 10 0	,, bars	0 0 – 4 0 0
Refined metal	0 0 – 3 7 6	Refined	0 0 – 4 6 0
Bars, Staffordshire	0 0 – 6 10 0	Straits *h*	0 0 – 4 4 0
Pigs, ditto	3 0. 3 15 0	Banca, for home con.	0 0 – 4 6 0
Welsh cold-blast foundry pig	3 15 – 4 5 0	ditto for export only	0 0 – 3 16 0
Scotch pig *b*, Clyde	2 1 6 2 4 0	TIN-PLATES—Ch., IC *i*, box	0 0 – 1 10 0
Do. toughened, Wales	4 0 – 4 5 0	,, IX	0 0 – 1 16 0
Stirling's Pat., Glasg.	3 0 – 3 5 0	Coke, IC	0 0 – 1 7 0
Rails, average	5 0 – 5 10 0	LEAD—Sheet *k* ..*ton*	0 0 – 17 0 0
Chairs	0 0 – 4 0 0	Pig, English	16 0 – 16 5 0
Russian, CCND *c*	0 0 – 17 0 0	,, Spanish	14 0 – 15 0 0
,, Archangel	0 0 – 13 0 0	Red	0 0 – 18 0 0
Swedish Steel, fagt. *d*	0 0 – 15 0 0	White ditto	0 0 – 22 0 0
,, ,, keg *e*	13 10 – 14 0 0	Shot (Patent)	0 0 – 19 0 0
COPPER—Tile *f*	0 0 – 78 10 0	SPELTER—(Cake) *l* on spot	0 0 – 15 0 0
Tough cake	0 0 – 79 10 0	For arrival	15 0 – 15 5 0
Chili	0 0 —	ZINC—(Sheet) *m* export.	0 0 – 20 0 0
		QUICKSILVER *n* ..*lb.*	0 0 – 0 3 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¾-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash. in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash *m* Discount 1½ per cent. *n* Discount 1½ per cent.

REMARKS.—The metal market generally has varied but little during the past week and, although the want of orders in Wales is being felt, prices remain stationary. In Scotland the stocks of pig-iron are increasing, and we have to report a still more limited demand for legitimate purposes. Within the last few days the market has given way fully 1s. per ton, sales having been made at 41s., cash, free on board at Glasgow. We quote the price 41s. per ton either for all No. 1, or mixed Nos., at which there are sellers to-day.

LEAD ORES

Sold at Liskeard, on the 20th November.

Mines.	Tons.	Amount.	Purchasers.
Wheal Trelawny	96	£16 10 6	J. T. Treffry.
Sold at the White Horse Hotel, Holywell, Nov. 23.			
Pant-y-mwyn	20	£9 0 0	Walker, Parker, & Co.
Pen-yr-henblas	46	9 12 0	Mather & Co.
ditto	40	9 13 0	J. P. Eyton.
Westminster	50	8 18 0	Walker, Parker, & Co.
Jamaica	60	9 3 0	Mather & Co.
Belgrave	30	9 0 0	ditto
Conlig	50	8 18 0	Eyton; Mather; Walker
Barristown	30	10 0 0	Newton, Keates, & Co.
Rhewerth	10	9 18 0	Walker, Parker, & Co.
Total tons	336.		
Sold at the Mine.			
Llanfair	40	£24 7 6	Tamar Company.
Sold at Truro.			
Callestock	8	£10 13 0	Newton, Keates, & Co.
Sold at Aberystwith.			
Goginan	20	£13 8 0	Mather & Co.
ditto	80	13 15 0	ditto
Frongoch	90	8 14 0	Walker, Parker, & Co.
Bog	35	8 12 0	ditto
Nanteos	50	8 5 6	Newton, Keates, & Co.
Total tons	275.		

BLACK TIN.

Mines.	Tons.	Price per ton.	Purchasers.
Drake Walls	4¾	£47 2 6	Daubuz and Williams.
ditto	7¾	46 10 0	Daubuz and Calenick.
ditto	2½	38 10 0	Daubuz and Williams.
ditto	2	28 7 6	Calenick Smelting Co.
ditto	¾	31 10 0	ditto
Plymouth Wheal Yeoland	2	39 12 6	ditto
Wheal Anderton	2	46 0 0	H. J. Enthoven and Co.
ditto	2	37 10 0	ditto
ditto	4½	38 5 0	ditto
ditto	1½	33 7 6	Daubuz.
ditto	2½	21 0 0	Calenick Smelting Co.
ditto	1½	14 5 0	ditto

COPPER ORES.

Sampled Nov. 8, and Sold at the Royal Hotel, Truro, Nov. 23, 1848.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons. Wh. Josiah	93	£7 15 0	Wh. Anna Maria	38	£9 2 6
ditto	90	5 15 6	West Caradon	93	7 7 6
ditto	87	6 0 6	ditto	87	6 15 0
ditto	72	7 6 6	ditto	62	7 1 6
ditto	58	5 19 0	ditto	43	8 10 0
ditto	56	10 9 0	ditto	36	4 4 0
ditto	54	7 8 0	ditto	19	10 1 6
ditto	42	7 11 6	Fowey Consols	98	6 11 0
ditto	30	9 11 0	ditto	96	5 3 6
Wh. Fanny	100	5 4 0	ditto	78	6 0 0
ditto	89	5 4 0	Wh. Friendship	102	7 8 0
ditto	79	5 2 0	ditto	100	7 9 0
ditto	76	4 8 6	ditto	30	4 9 0
ditto	74	5 4 0	Poldice	53	4 5 0
ditto	73	4 3 0	ditto	52	4 2 6
ditto	62	4 7 0	ditto	20	5 6 6
ditto	55	4 17 0	ditto	11	2 15 0
ditto	29	4 12 0	Bedford United	102	4 14 6
Wh. Maria	80	5 3 0	Creeg Braws	77	3 0 0
ditto	53	6 10 6	ditto	13	2 15 6
ditto	50	14 4 0	Wh. Maiden	20	4 2 0
ditto	31	14 10 6	Wheal Jewel	17	4 8 6
Wh. Anna Maria	60	5 14 0	Wh. Unity Wood	4	4 15 6

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Devon Gt. Cons. Wh. Josiah, Wh. Maria, Wh. Fanny, Wh. Anna Maria	1531	£9913 1 6	Wh. Friendship	232	£1633 6 0
			Poldice	136	576 10 0
			Bedford United	102	481 19 0
			Creeg Braws	90	267 1 6
			Wh. Maiden	20	82 0 0
West Caradon	340	2419 18 0	Wh. Jewel	17	75 4 6
Fowey Consols	272	1606 14 0	Wh. Unity Wood	4	19 2 0

Average Standard .... £83 10 0 | Average Produce 10¾
Average Price per ton £6 4 6
Quantity of Ore .... 2744 tons. | Quantity of Fine Copper, 294 tons 17 cwts.
Amount of Money £17,074 16 6
LAST SALE.—Average Standard .... £86 15 0.—Average Produce 9¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	228½	£1156 3 6
Vivian and Sons	693½	4749 9 0
Freeman and Co.	244	1434 14 6
P. Grenfell and Sons	346½	1923 18 9
Sims, Willyams, and Co.	438½	2732 2 9
Williams, Foster, and Co.	654½	4436 1 6
Schneider and Co.	138½	642 6 6
Total tons	2744	£17,074 16 6

Copper ores for sale on Thursday next, at the Royal Hotel, Truro.—Mines and Parcels.—United Mines 958—Consols 902—Tresavean 396—Treviskey 361—Par Consols 314—Wheal Mary Consols 264—South Caradon 221—Treleigh Consols 203—Wheal Comfort 174—Trethellan 173—South Wheal Tolgus 173—Wheal Henry 110—Perran St. George 99—Wheal Ellen and Wheal Music 96—Grambler and Saint Aubyn 93—Ting Tang 34.—Total quantity of ore to be sold, 4571 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—East Wheal Crofty 758—North Pool 580—Wheal Seton 530—Camborne Vean 485—Tincroft 340—Condurrow 302—South Wheal Basset 290—Fowey Consols 224—East Pool 210—Dolcoath 163—South Wheal Frances 131—Wheal Mary 83—Wheal Bucketts 66—Wheal Busy 42—Wheal Andrew and Nangiles 37.—Total, 4240 tons.

COPPER ORES

At SWANSEA, for sale December 7.—Cobre 63, ditto 55, ditto 45, ditto 79, ditto 70, ditto 104, ditto 101.—Berehaven (Kellogue) 121, ditto (ditto) 108, ditto 99, ditto 94.—Burra Burra 72, ditto 71, ditto 55, ditto 49, ditto 59, ditto 56.—Chili 86, ditto 43, ditto 42, ditto 27, ditto 50, ditto 49, ditto 41, ditto 40.—Knockmahon 104, ditto 79, ditto 45, ditto 30.—Copiapo 83, ditto 82, ditto 66.—Princess Royal 51, ditto 11.—Kapunda 62.—West Dolfrwynog 20, ditto 19, ditto 12.—Total quantity of ores to be sold, 2330 tons.

NOTICES TO CORRESPONDENTS.

"W. W." (Torquay).—The information will be given regularly.

GADAIR MINE.—We have received a communication from Mr. Taunton, in reference to the recent proceedings of the company—the insertion of which we are compelled to defer, in consequence of its length, and the late hour at which it reached us.

"T. B." (Maraziou).—The subject is under consideration.

ERRATA.—In Dr. Murray's communication on Mr. Staite's electro light, in last week's Journal, for "Monichini," read "Morrichini;" and for "hydrochlorine gas," read "hydrochloric gas."

We must impress upon our correspondents the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

SIR,—Will some of your correspondents inform me what ironmaster brands his pig-iron "LNE . WARM;" I think it is made somewhere in Wales, and should feel obliged if you can assist me in discovering the maker's name, as I have some friends who are particularly desirous to have it.—D. : *Manchester.*

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, NOVEMBER 25, 1848.

We think it necessary to say to the proprietors of copper mines, and to the importers of foreign ores—BEWARE! We have heard that the smelters have, within the last fortnight, been endeavouring to intimidate the managers of Cornish mines, by threatening not to buy another ounce of ore from them, if they should make sales to any but themselves (the present smelters). We have even been informed of an instance, in which a negociation was interrupted, for fear of that threat being really carried into effect. Now, why do the monopolists resort to such expedients, to preclude other purchasers from the market? Are they apprehensive that a new era is about being opened in the smelting trade, when they may bid farewell for ever to the enormous profits they have enjoyed so long, at the expense of that interest they wish now to coerce into their service? Let the London, and other adventurers not overlook this. Let them be assured, that if any proof were wanting, this is sufficient to substantiate all we have ever said of the sacrifice of the mining interest to the smelters. Rely upon it, if the miner obtained a fair price for his ores, so as to yield the smelter a *fair* profit, the latter would have no need to make such use of his position as we have alluded to; for any party who comes into the trade, whether it be a public company or a coalition of private individuals, the object can only be to obtain a profit, but not an exorbitant one, to the injury of others. We think, therefore, that the eyes of all mine adventurers must now be opened to a conviction, that it is high time to bestir themselves to secure their just rights, and to place their property on such a footing, that it may yield its legitimate returns. We have also been informed, that the smelters have offered to buy all the Burra Burra, and other Australian ores, immediately on its arrival in England, and to defray all the expenses of reshipment and freight to Swansea, and also to pay half the value in cash. We are satisfied, however, that the importers will not be so imprudent as to commit themselves in this matter; let them not enter into any such contract. If the proposal be true (and we have good authority for alluding to it), we can have very little doubt of its object; but if that were gained, where would the importers be then? Why, the smelter would take good care to deduct all his expenses of conveying the ores to Swansea, from the price he had to pay for them. The importer of Australian ores would certainly be made to suffer for the rashness of any engagement he might unwarily be induced now to contract. All these manœuvres on the part of the smelters are intended merely to serve a temporary purpose; but we advise the British and foreign miner and the importers to be firm, and wait the course of events. Defeat the deep-laid schemes of the monopolists, and, by maintaining your own independence, secure for yourselves a permanent and a fairly remunerative trade!

We annex a letter that appeared in our columns on the 12th February last, which so well expresses the actual position of the miner and the smelter, that, from the great interest attached to the subject at present, we need make no apology for thus reproducing it:

"Let us look at a few facts. Smelting, to our cost, is a great monopoly; we have been told so often enough, and we know it. The smelters consist of a few individual firms, who, uniting with the tact and cleverness of business the mode of (what has been beautifully termed) "working the oracle," have raised to themselves colossal fortunes, and are, in consequence, masters not only of the metal markets, but of the miners. Many members of these firms were formerly "miners"—they have as it were, risen from the ranks, and find their present business more lucrative than underground operations; and, if such men as these see gentlemen of high station, and others of high standing in the commercial world (who are, in a general way, scrupulously exact in all their dealings, and view, with the greatest jealousy, any attempt to impose upon them in transactions connected with their own business), allowing them to continue a shameful, but, to them, an enriching monopoly—are they (that is, the smelters) to blame? Of course not—their sole business is to make money, and, like Sir Pertinax, they do it. The "oracle" is said to be worked thus—the smelters meet every month in London, and fix the price of copper (the metal), and then send off to their agents, at Swansea and in Cornwall, to guide them in the prices they are to bid for the ores at the ticketings. This is regulated so as to give them a clear profit of about 30 per cent. The smelter is not content with the tradesman-like returns, of buying an article in the rough, and manufacturing it, so as to get a fair profit upon the transaction: he assays the sample of ore he intends to bid for, finds out how many tons of the ore it will take to yield a ton of pure metal, and knowing what he can get for the latter, and the cost he will incur in making it into metal, he bids a price for the ore according to its produce. This would appear fair enough; but he goes on to say—"Now, Mr. Miner, your ore yields 10 per cent.; 10 tons of it, therefore, will give me 1 ton of metal. This ton of metal is worth 100*l.*—so that, if I give you 8*l.* per ton, I shall get 20 per cent. profit; but, then, Mr. Miner, it will cost me something to make it into copper, and *I must charge you* 2*l.* 15*s.* per ton—so that I will give you 5*l.* 5*s. per ton for your ore* and if you do not like the price, take it home again. And, by the way, Mr. Miner, in carting and shipping the ores, there may be a waste, and I must have 21 cwts. to the ton—so that, in 100 tons, I shall get 5 tons into the bargain; and so good morning, Mr. Miner." The miner, poor devil, what can he do? He knows the expense of smelting is not half the amount per ton charged him, and he also knows the waste per ton is not, perhaps, 1 oz.; whilst, according to the custom of Cornwall, he has to allow these cormorants 1 cwt., or 5 per cent. In every way the smelter takes an advantage, until the miner can scarcely get a remunerative price for his produce, nor the workman for his labour. The injurious effects of this are already showing themselves in deep mines; and where it will end, unless something be done, I can only conjecture. Looking at this, what, I would ask you, Sir, is to prevent the formation of a public smelting company? To make a railway of questionable importance—to get up a company for providing means for a visit to the moon—a million is soon raised. Here is a tangible thing that would pay 30 per cent., and millions of capital unemployed! I believe there are now several gentlemen of high standing ready to subscribe their thousands each to forward the object, but it wants a *mover*—in fact, it wants a *head*. The profits of smelting are known to be enormous. I have heard, but cannot vouch for its truth, that the profits of a single year have *been counted in millions*, and this does not appear so incredible, when we look at the enormous fortunes realised in a few years by the monopolists of the trade; I would, therefore, suggest that a public smelting company be formed, with a capital of one or two millions, to be raised by shares, and that every mine in Cornwall, Devon, and in other parts interested in the question, should subscribe for a certain number of shares, according to the extent of its returns; the other shares would soon be taken up by the mine adventurers and the public. Upon these shares large interest would be paid, and the mine-owner would be doubly advantaged, by getting a fair price for his produce, and good interest for the money advanced to bring it about. The directors of Devon Great Consols, indignant at the low price offered for their ores, and the sacrifice of hundreds of pounds they have to bear monthly upon their sales, complained to the smelters; and the latter met them, but, as I am told, offered no redress. These directors and shareholders are men to whom 10,000*l.*, or even 20,000*l.*, would be no object. If they are not also of the complaining and non-acting sort, let them show the spirit to come forward, and head the movement, and we shall soon have the company established. A way of punishing the monopolists would be, by every mining company coming to a resolution, to return just sufficient ore (and no more) to pay working cost. The furnaces of these gentlemen would then be rather bare, and better prices might ensue."

In several late Numbers of the MINING JOURNAL, under the title of "Our Lost Markets," we have laid before our readers a comprehensive view of the past and present position of the continental states, as regards our commercial relations with them; the causes which have led to our diminished exports, in proportion to the continually increasing population; and the measures most likely, if carried out, to restore our trade to that rank which it ought to hold in the scale of European nations. These papers are from the pen of a gentleman whose commercial acquirements and political experience eminently qualify him to enlighten the public mind on this important subject, and to which we call the special attention of our readers. Although the immediate cause of the present depression of our continental exports has been the lighting up the torch of anarchy and civil war, the flame of which has spread like a contagion throughout Europe, still it is shown that there are other approximate causes which have long been in existence, tending to paralyse commercial enterprise; and, notwithstanding our immense capabilities of production, rendering it impossible to compete with even the inferior productions of the manufactories of the interior provinces of Germany, Prussia, &c. This, in a great measure, results from the tolls and exactions with which the roads and rivers are hampered, the impoverishing effects of the land tax in all the German states, and the carrying out prohibitory laws, which strangle the energies of a country in its birth, and circumscribe within the narrowest limits the encouragement of trade and manufactures. It is, however, but reasonable to expect that a vast change for the better will eventually take place—that as new Governments settle down in the midst of renewed peace at home, and greater commercial facilities abroad, through the establishment of railways, they will act on principles diametrically opposed to the one-sided and exclusive policy of their predecessors; and by the abolition of harrassing and destructive duties on foreign manufactures, adopt such liberal views as will secure an uninterrupted interchange of national commodities, and thus advance the wealth and happiness of the population individually, and their real prosperity in a national point of view

We are glad to find that the attention of the public is again roused to the oft-mooted, but too sadly-neglected question which has formed, from time to time, subject of comment in our columns—that of accidents in mines and collieries; while it is only by constant agitation, that we can impress on the Government the duties which, we contend, devolve on them. To address the lords of mines, or owners of collieries, is too absurd to admit of a moment's thought; while we regret that the public—who are not directly interested in the question of gain, by way of profit arising from the labour of the working miner and collier, or the sad results attendant on the loss of life, which annually takes place among that class—cannot be expected to come forward in the adoption of a course, so shamefully neglected by those in power, and, moreover, those whose income and princely fortunes, in some cases, may be said to be in a great measure dependent on the labour and lives of their fellow-creatures.

We are fully sensible, that in again addressing our readers on this sad subject, we may be met by the expression, that it is the same oft-told tale, although, perhaps, conveyed in somewhat different expressions. Yet it is the simple record of the loss of life—the want of humanity—and yet we shall be told of the various asylums and hospitals, "supported by voluntary contributions;" but where, we would ask, is the asylum for the widow and orphans of the miner, or collier, whose life has been sacrificed in pursuit of his daily labour? Where the hospital for the afflicted mind? There is but one body of men who evince any interest as regards the sufferers, and that alone is manifested by the officers of the Poor Law Union, who naturally feel any addition to their list of paupers. We will not dwell on the question, but simply give a statement of the deaths and casualties, as they appear recorded in our columns. The number of accidents for the year 1847, and which, it must be borne in mind, form but a small proportion, and, perhaps, not even a tithe of those which occur, will be found to amount to 480—the loss of life being reported at 623, and parties sustaining injuries 196; in addition to which, at least an equal number may be added, the numbers not being given—making in all upwards of 1000 souls, on whom, if we consider, on an average, three members to each family were dependent, would give a total of 4000. This, be it remembered, is the report of *one* journal, published in the City of London, without any opportunities afforded of acquiring information, except from private communications which are like angels' visits, "few and far between," and the public press; and these results may, as we have before observed, be at least quadrupled, if not multiplied tenfold. Of the cases we have recited (480 in number), it will be found that 90 were those of explosion, by which 221 lives were lost; while the remainder are made up by irruption of water, 39; fall of roof 163; accidents in pit, or shaft, 80; and sundry causes, to which death was to be attributed, but not particularised, 118—making a total of 623, in addition to those who, removed from the scene of danger, in most cases, in all probability, lingered for a time, and were forgotten. The number of accidents during the present year, as made up from the returns in our columns, will be found to be 302, the loss of life being 446, of which 191 were from explosion of fire-damp; and those sustaining injuries, 151, which latter may be more than doubled or trebled, from the nature of the reports made. Thus, we should have to record at least 750 up the present period. The following will be found to be the monthly returns:—

	1847.			1848.		
	Deaths.	Injuries.	Total.	Deaths.	Injuries.	Total.
January	92	15	107	53	29	82
February	56	15	71	84	20	104
March	31	12	43	39	7	46
April	48	15	63	42	20	62
May	40	8	48	25	8	33
June	44	13	57	40	11	51
July	80	15	95	14	17	31
August	46	25	71	46	9	55
September	26	19	45	31	8	39
October	60	40	100	26	17	43
November	57	5	62	36	5	41
December	42	14	56	—	—	—
	623	196	819	446	151	597

Although we can add but little in the way of statistics, to excite attention and sympathy beyond the simple returns above given, it may be well to examine into the causes to which this fearful loss of life is to be attributed, so that we may consider whether some remedy may not be applied, either by care being enforced in the cases of fiery collieries, or where the air is known to be bad—in enforcing the use of proper machinery, the safety of ropes, and that general attention being observed which the labourer has a right to expect from his employer, and which the Government has a right to impose. However, let us to our record. The following will be found to agree with our weekly reports, showing the loss of life during the present year, 446, of which nearly 45 per cent. arose from explosions of fire-damp:

1848.	Explosions.	Fall of Roof.	Pit Accts.	Sundries.	Tot. Deaths.	Inj. not enu.	Tot.
Jan.	9	20	15	9	53	29	82
Feb.	33	17	15	19	84	20	104
March	11	29	6	2	39	7	46
April	28	8	3	3	42	20	62
May	5	15	1	4	25	8	33
June	22	11	2	5	40	11	51
July	—	5	3	6	14	17	31
August	32	7	1	6	46	9	55
Sept.	11	9	3	8	31	8	39
October	10	9	3	4	26	17	43
Nov.	30	10	4	2	46	5	51
	191	131	56	68	446	151	597

We will not further intrude the subject on the attention of our readers this week, but we do hope that "one and all" will agree that some steps should be taken, to remedy an evil which we have shown to exist to so great an extent. We will not repeat the arguments which we have so oft put forward, but simply address ourselves to those who, embarking their capital in mining enterprise, are too frequently unconscious of the toil and danger the miner undergoes; while we trust, on the meeting of Parliament, some one Member will be found charitable enough to enforce on the House, and on the Administration, the claim and rights of the working miner and collier.

A correspondent, whose letter will be found in another column raises a question—one, we are ready to admit, of the first importance; and as it would seem we were quite right in assuming there was more than one opinion entertained as to the meaning to be attached to a clause in an Act of Parliament, while we believe there are more learned counsel at the bar than Mr. Serjeant MANNING, who are innocent as to the bearing, intent, and meaning of the Cost-book System. Our correspondent refers us to the meeting of a "Society for promoting the Amendment of the Law," and tells us that the learned serjeant, whose name we have quoted, "bore testimony to the satisfactory manner in which partnership, *en commandité*, had worked in various countries." We are not prepared to canvass the question, or doubt the correctness of the statement, put forward by the learned serjeant; but, at the same time, we would submit there are points mixed up with the courts of law in other countries, touching on partnerships *en commandité*, which would not be found to work well with our mercantile classes. We will, however, pass over this, and at once approach the particular point mooted by our correspondent—that of individual shareholders being liable for the whole debts of the concern in which they hold an interest. Such was the statement we put forward, and we did so advisedly, and with the object of enforcing the necessity of adventurers adhering closely to the Cost-book System, the absence of which is felt most severely in many cases we could name. We again repeat our conviction, that any one adventurer, although he may hold however slight an interest in a mine worked under the Cost-book System, and although he may have paid his calls and fair proportion of all expenses which may have been incurred, is liable to the whole of the debts of the mine; and, moreover, that even if he transfer, or sign over, his shares in the Cost-book, he is still liable for any debts incurred while he may have been an adventurer. It is true, he may have his remedy against the party to whom he sold his shares, who may have taken them with a perfect knowledge of all the liabilities, and who may have taken upon himself, as between the parties, to discharge the same; but this will not release the adventurer so transferring his shares from the claims of a *bonâ fide* creditor. We agree with our correspondent, that it does appear somewhat hard; but the remedy, or rather the antidote, is in his own hands, and those of any party becoming an adventurer in a mine. Let him first inquire what is the state of the accounts, whether there be any liabilities or obligations, or what cash in hand; let him ascertain in whom the management is reposed, and who are his co-adventurers. We may be told this information is not so easily acquired—our reply then is, that the party is foolish who invests his money on the representations of others, without satisfying himself on these main points. How many, we would ask, are there who, as adventurers in mines, are ignorant whether the lease has five or fifteen years to run—who are alike ignorant of the dues payable—their answer being "the usual dues," whether a twelfth or a twenty-fourth. Let the cost-book be produced at the periodical meetings—let the purser's, or banker's account be duly examined and passed—let the vouchers be produced—let no liabilities be incurred, and our correspondent may rest satisfied that he will have no cause for apprehension of being brought into the courts of law; while the Stannaries' Court is, moreover, his safeguard and protection.

We have said thus much for ourselves, and which we think bears so strongly on the observation made by Mr. Serjeant MANNING, as to require but little further comment. The learned gentleman is reported to have stated, "that the principle (that of partnerships *en commandité*) was already carried out in the mining districts, where shareholders in mines *were only liable to the amount of their shares.*" We believe that His Honour the VICE-WARDEN, or any one practising in the Stannaries Court, at Truro, would set the learned counsel right in one moment on this point. That court is one of law and equity, and while we are advocates for some clear exposition of the law, to meet the equity of the case, which, we must say, is not the invariable rule observed, and anxious as we are that rules should be laid down that "those who run may read," we feel well satisfied that we must not go to the lawyer to amend the law—for it cannot be expected *he* would render that more simple, while the more complex it is the more fees fall to his share. We regret that, so far as the Cost-book System is concerned, we cannot ease our correspondent's mind; but we have told him how to avoid falling into the pit—the road is straight before him, he has to turn neither to the right nor the left, and, moreover, to see that others follow the same course.

In our Journal of last week we made some observations on the pending Chancery cause, in which the COPPER MINERS' COMPANY are the defendants; wherein we find we have in some measure misapprehended the state of the pleadings, and the actual circumstances of the suit—in reference to which a letter appears in another column. Instead of saying, as we did, that the bill filed in the Vice-Chancellor's Court by the plaintiff was dismissed for want of equity, we ought to have said that the general demurrer, by which the defendants sought to resist the bill, was overruled for want of equity—that is, that the objections against the bill were, in the judgment of the VICE-CHANCELLOR, *unsustainable*. From this decision the defendants have appealed to the Court above, and the suit awaits, at this moment, the decision of the LORD CHANCELLOR. Within these few days, we have known more perfectly than we knew before the peculiar circumstances under which the large loan, or rather the series of loans, obtained from the Bank of England were conceded to the company. Application, it appears, was made to the Bank for help in September, 1847, and the assistance asked for granted, the Bank making no inquiries as to the resources, or the solvency, of the company. The application is renewed again and again within a short period, with the same repetition of success—the Bank continuing to bolster the company up, upon its assignment of large parcels of its real property, which, under circumstances, amounting *pro tanto* to those of bankruptcy, the company had no legal right to make any disposition of.

These circumstances are the more startling, when it comes to be told, that four of the directors of the Bank of England had been for years directors also of the Copper Miners' Company, and that thus the leading men of the two corporations had the power of playing into one another's hands. When speaking on this part of the subject, on a former occasion, our impression was, that the Bank having advanced these large sums, in the hope of arresting the downward course of a suffering and a sinking company, it had the clearest and most indubitable of all claims to a full indemnification—that, in fact, to attempt to annihilate such a debt by process of law, or by the application, to however limited an extent, of the American method of liquidation, would be one of the foulest of commercial crimes. Our views, however, contemplated the absolute integrity of both parties in the transaction; but if, on the contrary, the pleadings and affidavits put in justly raise a presumption of collusion between the parties, or if motives, private, personal, and sinister, are seen to flash over this somewhat dark fragment of commercial history, then we think the Court of Chancery will have done well in stamping, with its affirmative authority, the views embodied generally in the plaintiff's bill. We for these reasons, in some measure, modify our former views on the subject, cancelling, as fully as possible, any imputation which we may have cast constructively on the conduct of the parties interested in this suit. A new opinion is, all the world over, the natural and logical result of a new state of facts—and with new evidence a recent communication has fully furnished us.

OUR LOST MARKETS.—No. IV.

Our Crown colonies are at present the best markets for our manufactured goods, if we look at the rate of consumption per head, and not at the source of payment which enables such large importations to be made. Our West Indian colonies may be roughly estimated to contain 1,000,000 of inhabitants, and they imported of British products and manufactures, in 1846, at the rate of 2*l.* 10s. per head. In the same year, the North American colonies imported at the rate of 1*l.* 6s.; Mauritius, 2*l.*; Australia, 7*l.*; the Cape of Good Hope, about 2*l.* 10s. Ceylon is mixed up in the returns of the Board of Trade with British India—so that the account given of both is very much confused.

Attention was sufficiently drawn in the last session of Parliament by Sir W. Molesworth, to the fact that this consumption is not *bonâ fide* the result of mere trade, a large proportion being on account of stores for Government, and a portion being paid for by salaries defrayed from the imperial revenue. Still, with all deductions, these markets present a remarkable contrast with others. They show a consumption of British products to the value of 8,000,000*l.* sterling, by populations not exceeding 3,500,000; whereas our exports to Central Europe we saw did not exceed 10,000,000*l.* sterling, for a population of 100,000,000, from whom we import largely.

But if we compare those exports to our Crown colonies with the consumption of British India, the contrast is still more striking. In Hindostan 200,000,000 of inhabitants, who are either our unquestionable fellow-subjects, or who are by situation and circumstances prevented from trading elsewhere, took less than 6,434,456*l.* in value of our products, because the importation of Ceylon is included in that sum. Now, if it could be proved that supplies came from other quarters, or that the home manufacture of British India was peculiarly flourishing, we should not attempt to explain this undeniable fact solely by attributing it to the misery and paralization of resources with which the finest portion of the globe is stricken by its present system of taxation. We know, however, that no other power trades to any extent with the Indian peninsula. We know, too, the prevalence of the lament, that our machinery has destroyed the domestic industry of the natives. And yet we see this miserable result for our traders and manufacturers officially proclaimed, and it is a matter of notoriety that a large proportion of the natives of India go about next to naked. If they do so from choice, their notions of luxury must have very much changed under European rule from what they were under their native sovereigns, and from what is indicated, as being a natural impulse there, as well as elsewhere, by the custom of making presents of dresses of honour on all occasions. No doubt, we think, can remain in any dispassionate mind upon the true state of the case, after a due consideration of the circumstances attending this extraordinary exhaustion of so immense a market. But, with those who still have doubts, we trust that our having pointed out in what manner the markets of Europe are destroyed by taxation, will be allowed the weight which so interesting a parallel may claim.

In British India all the errors which we have shown weigh heavily on Central Europe, and which, by preventing accumulations of capital, destroy the fund out of which wages must be paid, are found crushing with united power every germ of prosperity as soon as it shows a tendeny to shoot. The land-tax devours not one-third, but frequently 90 per cent. of the earnings of the husbandman. It is carried by inquisitorial power into his fields, and follows his crops in all their gradations. Nay more, while unable to sell his produce for money, owing to the distance of markets, the want of roads, and the distraints of collectors, he is yet forced to pay this tax in money, and that frequently at valuations which remind him of the prices produce bore when the tax was first imposed by heathen lords, but which are no longer current, while Christian rulers exact the same tribute. A powerful remonstrance from the first houses in Bombay compelled the Government of India, in 1846, to go through the form of nominating a committee to inquire into the decline of cotton cultivation in India. This committee was hurried into reporting (as they expressly state) before answers to the queries they had addressed to many collectors were received. The report is, nevertheless, highly valuable, and contains, amongst other official documents, the following statement of the results of the assessment of the land-tax in the collectorate of Broach:—

Year.	Price of the bhar of kuppas, yielding 312 lbs. cleaned cotton.	Value of 1 lb. of cotton in Eng. money, at 22d. =1 rupee.	Value per beega, producing 39,199 lbs. of cotton.	Land tax on a beega, in Eng. money.
1834	*Rps.* 56	£0 0 3½	£0 12 2¾	Varied with every season, until it was averaged on the beega as below.
1835	47	0 0 3¼	0 10 7¼	
1836	52	0 0 3½	0 11 5	
1837	36	0 0 2⅜	0 8 1⅝	
1838	48	0 0 3½	0 11 5	
1839	33	0 0 2¼	0 7 4	
1840	43	0 0 3	0 9 9½	£0 4s. 5½d., or at the usual yield, 1¾d. per lb.
1841	28	0 0 1⅞	0 5 8¼	
1842	30	0 0 2	0 6 6¾	
1843	33	0 0 2¼	0 7 4	
1844	30	0 0 2	0 6 6¾	
1845	30	0 0 2	0 6 6¾	
1846	30	0 0 2	0 6 6¾	

Thus, at present prices, out of a crop yielding 2d. per lb., the wretched ryot has to pay an average assessment of 1¾d., leaving to pay the cost of tillage of an exhaustive crop, and to support life, three eighths of the produce in average cases.

Our space does not allow of our transcribing some other equally interesting tables in this most valuable report, which show how the land-tax, in spite of repeated orders in council to the contrary, follows every improvement in cultivation, and gnaws at the root of industry. We are, however, induced to add another specimen of Indian taxation from a private source, but whose authenticity is undoubted, since the figures were given to us accompanied by the actual receipts of the tax-gatherer, which have been sent to this country. The district taxed as below lies near the Malabar coast, and belongs to the Madras presidency. The statement shows the taxes levied on the wretched houses, and even on the implements of industry used by the poor Hindoos. The Government tax on rice is nearly one-half the produce; on the fruits of trees it is fixed at so much per tree. On tools the charge will most astonish the readers of the *Mining Journal*, since it seems that a knife, which cannot well, at Birmingham, be worth more than 1s., pays *an annual tax of* 1½ *rupees*, or 3s. Under such circumstances it will excite no surprise, that our exports of cutlery are small.

Statement of Taxes Levied on Five Districts in the Madras Presidency.

232 Paddy fields, renting 38,895¼ varam daughies—of this Government assessment, 16,966 v. daughies, valued at 45 rup. per mil.*	*Rps.*	763	1	93
676 Paramba grounds, containing 9031 cocoa-nut trees	*Rps.*	855	9	40
" " 6774 betle-nut trees		169	1	40
" " 1724 jack trees		344	3	20—1369 1 0
Increase of hill Paddy, &c.			3	0 98
441 Houses	*Rps.*	360	3	65
47 Shops		33	3	0
5 Oil mills		2	1	60
1 Weaver's loom		1	0	0
1 Carpenter's chisel		1	0	0
1 Goldsmith's hammer		1	0	0
1 Blacksmith's anvil		1	0	0—401 0 25
54 Toddy knives				71 1 60
Decrease in Paddy fields				0 2 31
Total	*Rps.*	2609	0	12

If to this statement we add, that export taxes are levied on all shipments, and that the knives and the anvil (if imported) paid an import tax, we shall have prepared our readers for another statement, which we offer on the authority of Col. Sykes, from whom it is quoted by Mr. M'Gregor in his new volume of tariffs, treating of India. It forms a part of the scanty statistical data, doled out semi-officially by the East India Company, on the subject of their fiscal system.

In the north-west presidency (the only province of which any account is given), it seems that of 43,937,062 acres,

22,340,824 acres are cultivated.
10,528,658 acres are uncultivated.

Total ..... 32,869,482—all assessed for land-tax.

About 9,000,000 of acres are stated to be barren, and 1,000,000 to be specially exempted. It hence appears that one-third of the tilled land has been put out of cultivation, and that one-fourth is retained in a state of barrenness by the effects of this most unwise tax, notwithstanding the accounts of the company show annual loans made to the wretched ryots to induce them to till lands under the system. It may, perhaps, be allowable for the East India Company to do what they will with their own, and to spoil their chance of getting a suitable revenue from these fine countries; but their right to spoil the markets of our miners and manufacturers is a very questionable one; and we trust the few facts here adduced, will cause some friends of our industrious population to look into the matter.

* Rice is now worth from 26 to 30 rupees only.

MALLEABLE IRON LEVER BRIDGE.

On Wednesday last, Mr. T. M. Gladstone, C.E., read an essay on iron bridge building, and submitted a plan for constructing a malleable iron lever bridge, to the members of the Society of Arts. After some preliminary observations, Mr. Gladstone stated, that he was desirous of rendering iron still further available for bridges, by the application of principles which had escaped even the eminent engineers of the day. The two great properties of iron—its resistance to compression, and its cohesion—had already been applied, the first in binding stones or bricks together, or in the construction of arches and abutments, and the second with considerable success to the construction of suspension bridges, one of which had been erected so early as 1741. Hitherto, however, it was cast-iron only that had been applied, and malleable iron was used solely for the purpose of binding masses of the former together. It was well known that railways required a perfect level, and great strength in the approaches, while it was evident that great difficulty was experienced in obtaining the first by means of an iron bridge. Cast metal had been used, but, in his opinion, it was treacherous, and the plan which he proposed was intended to obviate these difficulties by the use of malleable iron, and the application of that great mechanic power—the lever. His *modus operandi* was to erect stone piers, and having obtained the necessary elevation, to project from each a number of malleable iron bars, grooved together, and decreasing in number till the arms met in the centre. The weight would thus be distributed and diminished as they approached. It was, in fact, a compound lever, and the weight of the bars would be 100 lbs. to the foot. The superiority of malleable iron for his purpose was evident from its intrinsic properties. It possessed, in a far greater degree, the attraction of cohesion—cast-iron, as compared to it, being 17 to 56. He contended that, by this plan, a bridge could be constructed, in whose materials the extension and compression would be the same throughout, in which the lateral expansion would be prevented, and whose resistance would be greater than its tension. Mr. Gladstone concluded by some general observations. He was listened to throughout with considerable attention by a numerous audience, amongst whom were several gentlemen distinguished in science, and a vote of thanks to him for having brought the subject forward, was unanimously agreed to. The views of Mr. Gladstone certainly rest chiefly on theory, but present nothing, in the slightest degree, inconsistent with the principles of science; and, from the importance of the subject, we trust they will shortly be tested by experiment.

GIGANTIC CYLINDER.—A cylinder of unusual magnitude was cast on Wednesday last, at the Haigh Foundry, Wigan, in the presence of a great number of spectators, who had been attracted from various parts of the surrounding district to witness the novelty of so large a casting. The cylinder is 8 ft. 4 in. diameter, and about 17 ft. long, and is intended for a direct action pumping-engine, to be erected at Mostyn Colliery, Flintshire, under the direction of Mr. John Lancaster, of Wigan; the weight is about 22 tons, and the quantity of metal melted was nearly 30 tons; when at work it will sustain a load upon the piston equal to 80 tons, with 14 feet of stroke. We believe this is the largest steam-engine cylinder in the world, with the exception only of those employed in pumping the Haarlem Lake, in Holland. No accident occurred during the operation, and as soon as it was ascertained that it was a "good run," a small discharge of gunpowder gave the signal for many hundreds of workmen and others to give three times three cheers, which was done with hearty good will. The Haigh Foundry Company have erected a boring-mill, for the purpose of boring this cylinder, and they have made it of sufficient capacity to bore one of 11 ft. diameter, and 19 ft. in length.

THE PATENT LAWS.—Any beneficial change in the law of patents, though slight, cannot fail to interest all concerned in the progress of the national industry—not only as regards the improvement thereby effected, but as nourishing hopes that even better things are in store for the ingenious and inventive. To us, who have used our best endeavours to bring about an amendment of the whole patent system, the recording of any improvement is peculiarly gratifying; it is with a feeling of some satisfaction, therefore, that we would now introduce to the notice of the readers of the *Mining Journal* the amendments effected by an Act of Parliament, passed during the late session, which provided—1. That the inconvenient and expensive practice of having *three distinct* offices for enrolling specifications of patents, be superseded; and that, from and after the 1st of January, 1849, they be enrolled in the Enrolment Office only.—2. That full validity be secured for all documents sealed or stamped with the Enrolment Office seal or stamp.—3. That proceedings in the Court of Chancery may be either in term time, or vacation.—4. That writs of *scire facias*, instead as heretofore being triable in Middlesex only, may be tried in any county of England or Wales.—5. And that the trial of issues in *scire facias* may be had in any of the superior courts, instead of being confined to the Court of Queen's Bench, as now.

A SUBMERGED GIGANTIC OAK.—During some recent operations for deepening the River Tyne, at Heaton Drop, about four miles below Newcastle, there has been discovered a portion of the trunk of an enormous oak-tree, imbedded in the sand, several feet below the surface. The specimen, which is only the upper part (probably the upper half) of the stem, measures 16 ft. 6 in. in circumference, and 18 ft. in length; but its girth is considerably greater at one end, where are situated the origins of three or four branches, one of which was still attached to the stem when found, and of the diameter of an ordinary-sized tree. In some places, the specimen is incrusted with a plate of iron pyrites, from $\frac{1}{16}$th to $\frac{1}{8}$th of an inch in thickness, having all the appearance of an electrotyped coating, and which is, here and there, crowded with miniature stalactites of the same mineral, varying in length from mere points up to an inch, and having a uniform perpendicular direction. This last circumstance, and their possessing no crystalline structure, prove that the so-called stalactites are not prismatic crystals. The wood is, for the most part, tolerably sound, and of a brown colour, particularly towards the centre; approaching the outside, however, it is black, and somewhat rotten. Where the surface is protected by the plate of iron pyrites, a remarkable change has taken place in the wood, which, for half-an-inch in depth, has quite a charred appearance, differing in no respect from burnt wood, or the mineral charcoal so often found intermixed with coal. No parts were observed to be decidedly bitumenised; nor was there any bark discovered. The presence of iron pyrites in this interesting relic, is not so singular a circumstance as might at first be supposed, considering that many of the strata over which the Tyne flows, and many of the springs which feed it, contain the chemical constituents (iron and sulphur) of this mineral in abundance; as a consequence, it is well known, all other circumstances being favourable, that whenever oxide of iron and certain of the sulphates, in water, come in contact with vegetable matter in a state of decomposition, a complex chemical action takes place; the iron leaves the oxygen with which it was combined, and unites with the sulphur to form iron pyrites, while the oxygen, and whatever was in combination with the sulphur, form new compounds with other bodies. On the other hand, it is difficult to explain how the wood has been converted into charcoal: there can be little doubt, however, that the change has, in some way or other, been dependent on the mineral which covers it; perhaps the heat, consequent on some of the chemical actions which took place while the iron pyrites were being formed, was sufficiently intense to burn the wood. Respecting the antiquity of this interesting relic, it is, of course, impossible to offer any opinion—that is, whether it was a denizen of the forest during some portion of historical time, or of an earlier period—say, the close of the tertiary, and when our island was the haunt of bears, elephants, and other preadamitic animals. The colour and texture of the wood are certainly not in favour of its high antiquity, though it must not be overlooked that a great portion of the tertiary lignite of the Rhine, and other places, has similar qualities; nay, specimens of fossil wood are occasionally found in the lias, just as little mineralised. The question of its antiquity, however, may be safely left for antiquarians and geologists to settle, several of both parties (and there are a few in Newcastle) being already at work, claiming it as belonging to their own domain; but the antiquarian has some difficulty (supposing the specimen to have been drifted from above Newcastle) in satisfactorily answering the question put by every one—How has it passed through the arches of the bridge? At any rate it is certain, that if the River Tyne had many such monsters revelling on its bosom now-a-days, King Hudson's "High Level" would stand but a poor chance of escaping from a low level catastrophe.

BELGIAN LOCOMOTIVES.—By a Royal decree, now in force, railway companies who may order from a Belgian factory engines, locomotives, or other necessary materials relating to railways, can, on demand of the purchaser, have them tried for a certain time on the state line. The reception of them can be made, still in the name of the buyer, by the committee of engineers intrusted with the reception of orders for railways in Belgium.

Original Correspondence.

PEAT CHARCOAL—A DISINFECTANT.

SIR,—Compressed peat, as well as the *peat charcoal*, referred to by a correspondent in your last Number, are doubtless applicable to all the purposes for which coal and coke are available. It is, however, as a DISINFECTANT that I now wish to allude to the *peat charcoal* prepared on the principle patented by Mr. Jasper Rogers. It seems that a series of comparative experiments were made, on the 18th of last month, at the house of Mr. Giles, of Stourbridge. Various offensive matters were acted on by Ellermann's "deodorising" liquid, both diluted and undiluted; also Burnett's chloride of zinc, and with Mr. Rogers' *peat charcoal*. In these trials Ellermann's *deodorising* compound (chloride of iron) proved a MISNOMER, for the resulting smell which arose from its action was not less offensive than the original one—in other words, the remedy was as bad as the disease! It was the same with Sir William Burnett's chloride of zinc. With the *peat charcoal*, on the other hand, the noxious effluvia were completely destroyed, and, like the rod of Moses, which swallowed up the rods of the Egyptians, so it also neutralised the offensive emanations which arose from the pre-application of Ellermann's (so called) deodorant!

It is well known, I have uniformly condemned an implicit reliance on Ellermann's "deodorant" as a *disinfectant*, and, if I mistake not, have assigned sufficient reasons for the caution. I have said, that those who trust to it as a *disinfectant* in scarlatina, typhus fever, or cholera, "lean on a broken reed." I now repeat the *caveat* most emphatically, and I appeal to these experiments, in testimony of the truth and justice of the condemnation. Mr. Wynn's advocacy of its assumed merits was a very sorry affair. A *sneer* is a poor apology for the absence of truth. J. MURRAY.

Portland-place, Hull, Nov. 20.

THE WANDERSTEIN.

SIR,—The anomalous locomotion of the *Wanderstein* of the continent, recorded some time ago, constitutes a phenomenon of no easy solution. I have supposed its transport might have been effected in some way analogous to that which occasions the "ground swell" in the Bay of St. Michael's Mount, Cornwall—a phenomenon every way obscure, and one to be ranked in the class of occult causes.

"The earth hath bubbles as the water has."

The elevation of the general level in Scandanavia is slow, gradual, and imperceptible, as are the depressions, it may be, in other regions; but *undulations* may be *locally* produced, as it were, *per saltum*, or in convulsive throes, which might suddenly change the position of the wandering stone, and as suddenly cease—all this, and much more, may be legitimately supposed, without having recourse to supernatural agency. There are many enigmas in our world of wonders well calculated to puzzle and perplex, much more than may be "dreamed of in our philosophy." The fall of meteoric stones from the atmosphere, and entombment of living organisms for untold and immemorial ages in the solid rock, may be cited in proof—so true is it that "we see but in part," and "the half has not been told."

The story of the *Wanderstein* recalled to my memory an incident belonging to bygone time. Brodie of that ilk, father-in-law of the Marquis of Huntly, being desirous to see a specimen of *palladium* in my possession, then a recent discovery, I called at Brodie House, for the purpose of showing it to him. Among the various topics of conversation mooted was that of the geology of the district; and I remember Mr. Brodie mentioned a circumstance, of a piece with that of the Wanderstein, in the case of a rock of many tons weight, and which formed the landmark between the estate of Brodie and that of the Earl of Fife, having been transported from 100 to 200 yards in a *single night* from its original site, being raised and floated on a *raft of ice*. If my memory is not at fault, for thirty-five summers have "floated" by since our interview, Mr. Brodie remarked that a similar circumstance had occurred *twice* in his lifetime. J. MURRAY.

Portland-place, Hull, Nov. 20.

PHILLIPS'S MACHINE FOR THE EXTINCTION OF FIRES.

SIR,—That dense gaseous media being negative, in relation to combustion, might, by judicious means, be made effective in the extinction of fires I do not mean to deny; but, whether Mr. Phillips's proposed method be the best mode of application may be open to question. I do not now, however, mean to discuss its merits.

It must not be forgotten, that both carbonic acid gas and steam may be *so attenuated by heat* as to be quite passive in extinguishing combustion, and steam, contrariwise, rather promotes than extinguishes fire—of this there can be no doubt. If you pour carbonic acid gas over the summit of flame, if at all fierce, it is entirely inert and immediately ascends, being expanded by heat. It seems to me that we should have a better chance of success if a quantity of common salt could be conveyed to the burning pile, and sulphuric acid made to bear upon it. Chalk and sulphuric acid might also aid materially in the extinction of fire, under judicious arrangement and management—great care being taken in maintaining a proper distance from these gases, so fatal to animal life. J. MURRAY.

Portland-place, Hull, Nov. 20.

THE ELECTRO-LIGHT IN MINES.—GAS FROM WATER.—WATER CONDUIT.

SIR,—There can be no doubt of the perfect safety of the electro-light for the illumination of mines; nor is it by any means difficult to ensure the requisite arrangement. The application of electricity to illuminate mines is by no means a novel suggestion.

Your correspondent, Mr. Symons, may be assured that the production of gas from water, &c., had been realised at least *ten years* anterior to 1846.

In reference to the communication from West Bromwich, I think that there can be no reasonable doubt that, if cast-iron pipes were *enamelled* in the interior, they would be *invaluable* for the purpose of conveying water, and the suggestion is an important one—the economical part of the question I shall leave intact. Cast-iron pipes, as generally employed for water pipes, are far more mischievous than may be generally supposed—an internal enamel would meet every objection to their employment for the conduct of water.—J. MURRAY: *Portland-place, Hull, Nov.* 20.

THE ELECTRO LIGHT.

SIR,—For some weeks past I have been alarming myself as to the silence of your able and valued correspondent, Dr. Murray: surely, said I, he has not left the abodes of men for the realms of MIND—no, or we should have had an announcement of the melancholy fact in your Journal. Ah! he is ill then, or, like myself, perhaps, worn down with struggling for a modicum of the physical comforts and necessaries of life requisite to sustain, in decency, a pilgrimage extending to between 70 and 80 years! Thanks, however, to our better fate, here (in your Journal of Saturday last) we have the doctor again, in really more than all his pristine vigour, and upon a subject, too, that no man on earth can, in my humble opinion, handle better—*i. e.*, the electro light. Here we have the whole explanation of the thing, divested of every technicality likely to confuse, or mislead, us in any manner; here are no selfish claims or allusions, nor any half thoughts or conclusions in the matter—all is clear, plain, and straightforward; and the whole communication does great credit to Dr. Murray, as well for the truths it contains, as for the candour and perspecuity of his language. May he go on writing in this style for at least 10 years more of time, is the sincere and ardent wish of my heart, and that without experiencing more of the usual roughings of the world than unavoidably attends a journey stretching to the length above alluded to.

There is one question I would wish to have Dr. Murray's opinion upon—viz.: in the production of the electro light, what becomes of the *charcoal?* In his communication of Saturday last, he says, "the light is entirely *independent* of the ambient medium, and effects *no chemical change* on its condition—therefore, *no deterioration* of the air can supervene from its use"—hence, I would repeat, what becomes of the *charcoal?* I can see no escape from this difficulty, except it can be shown to be evolved into *light alone*. If such should be the case, then, indeed, will a great and most important discovery be laid open to the world—a discovery that would go very far towards proving the truth of a "*new theory of Nature*," written many years ago, and published in your Journal about three years since, with a view to show that all created things are compounded of TWO ELEMENTS only, and not of *fifty-four*, as modern philosophers would have us imagine. Now, modern science has never attempted, or even hinted, at the possibility of the *annihilation* of matter! Yet if the *charcoal* used up in the production of the electro light cannot be tangibly accounted for why there is every appearance of its having been annihilated! With this subject of electricity I confess myself but very little acquainted; but, from the plain matter-of-fact of things, I cannot rest satisfied with any statement touching the total disappearance from the creation of any tangible body whatever; were such the case, what becomes of all our philosophy, and of the dogma that "*nothing can be destroyed?*" Hoping, therefore, to

see this disappearance of the charcoal, without a residuum, or a result, accounted for in one of your earliest Journals, and, if possible, by the pen of Dr. Murray, I remain, Sir, your's, &c., S. B. Rogers.

Nantyglo, Nov. 22.

THE COPPER AND SMELTING TRADES—No. III.

Sir,—My attention has been directed to an article in your Journal of the 11th inst., in which you refer to my suggestion, that the mining companies should make an annual return of the yield and produce of their mines; and, while agreeing with me as to the great desirability of such information, yet you consider it impossible to obtain them completely without a Legislative enactment. And, in your last week's Number, I observe that your correspondent, "E." (Ferranzabuloe) recurs to the subject, and admits that there can be no doubt of the importance of such a statement, but adds, that it would be attended with much difficulty. Your correspondent says, that much information on the point could be given in Liverpool, and that the private sales in Cornwall and Devon of themselves are very considerable, which, he thinks, might surely be obtained from some adventurers. "Of course (he continues) you cannot expect anything from Parliamentary returns, as they are confined simply to the imports and exports, and do not affect the produce of our home mines, which are private adventures, *and as not being subject to any duty or surveillance of the Government*, cannot afford any data, which, without returns from private quarters, must necessarily be confined to the Ticketting Papers." Now, it appears to me, that as far as regards the copper mines of Cornwall, you, as well as your correspondent, have lost sight of the provisions of the 6th and 7th William IV., cap. 106. This Act took effect on the 29th of September, 1836, and was intended "to make provision for the better and more expeditious administration of justice in the Stannaries of Cornwall, and for the enlarging the jurisdiction, and improving the practice and proceedings in the courts of the said Stannaries." I wish at present to draw your attention to two of its clauses; the 27th runs thus:—

"And be it further enacted, that there shall be paid, and payable, the sum of 1*d.* in the 1*l.* sterling on the value of all metals and metallic minerals (except tin and tin ore), which shall be, from time to time, brought to sale in, or *withdrawn* from, any mine within the said county of Cornwall; and that the head manager of every mine in the said county of *Cornwall* shall within 10 days after each quarterly account of the mine over which he is head manager, shall have been, or ought to have been, made up, transmit to the registrar for the time being of the Vice-Warden's Court, *a full, true, and particular account and return of all metals and metallic minerals* (except tin and tin ore) which shall have been brought to sale in, or shall have been *withdrawn* from the mine, of which he is such head manager during the preceeing quarter, *and* shall, in such return, state the value, in money, of the respective quantities of the metals and metallic minerals specified therein, at the time the same were respectively brought to sale or *withdrawn*, as the case may be; and that the head manager of every such mine shall, on application from the collector of the Vice-Warden's Court pay, or cause to be paid, to such collector the sum of 1*d.* in the 1*l.* sterling, on the aggregate value of all metals and metallic minerals (except tin and tin ore), which shall have been brought to sale, or *withdrawn* from such mine during the preceding quarter; and that every such payment by such head manager shall be considered as costs, and shall on passing his account with respect to the mine of which he is such head manager, be allowed to him accordingly."

Clause 31.—"And be it further enacted, that if the head manager of any mine shall omit to make *such full, true, and particular return as hereby required of the* quantities *of metals and metallic minerals* (except tin and tin ore), brought to sale, or *withdrawn*, as aforesaid in the mine of which he is such head manager, or of the value therof, as is hereby required, or shall, on demand made, omit to pay, or cause to be paid, such assessment as aforesaid, or shall wilfully make any false, or incorrect, return, then, and in every such case, such head manager shall be subject for every such offence to a penalty not exceeding 50*l.*"

I will ask, then, whether the Act I have just quoted is not sufficient to procure the actual yield of the Cornish mines? Have not these clauses been enforced since the passing of the Act? They appear to me to have been enacted for the principal purpose of affording correct data on this subject. The registrar, for the time being, of the Vice-Warden's Court has the power of obtaining the information from the mines in Cornwall; and if he were, half-yearly or annually, to make public the *total* quantities of ore, and amounts of money received, with the average produce per ton, it would be quite sufficient for all general purposes, and would entirely remove your correspondent's objection, who considers, that as mines are private enterprises, the Legislature has no more right to interfere with them than with the produce of a farm, or the returns of any mercantile firm. Indeed, the mode of publication I have suggested, would be precisely similar in its nature to the published returns of the Board of Trade, which give the total quantities of merchandise exported and imported by all the merchants.

In my last letter I gave you a short statistical account of the copper mines of Ireland. Before I proceed further, I may just remark, that there are, or rather have been, some in Wales; for, by *Grylls's* last *Annual Mining Sheet*, there appears public sales from only one mine, the Aberdovey, while in 1839 nearly a dozen appear in the list. The following table shows the sales of copper ore at Swansea, from the commencement of the publication of these sales in 1804 to 1848. Down to the year 1836, inclusive, I have used the amounts compiled from the published documents, by Mr. Robert Hunt, keeper of mining records. From 1837 to 30th June, 1848, inclusive, I have taken the statements from *Grylls's Mining Sheet*, which differ a little from those given by Mr. Hunt for the same years, but may be accounted for in two ways—that the latter is made up I believe to the 31st of December in each year, and, no doubt, some of the Welsh ores are included by Grylls in his "sundry small mines."

Particulars of the Public Sales of Welsh Copper Ores, at Swansea, *from* 1804, *to* 30*th June*, 1848, *inclusive.*

	Tons		Tons
1804	52	1821	191
1805	—	1822	412
1806	41	1823	564
1807	68	1824	358
1808	312	1825	1191
1809	240	1826	1115
1810	400	1827	1140
1811	88	1828	3555
1812	622	1829	6076
1813	442	1830	1788
1814	321	1831	1442
1815	1079	1832	3184
1816	600	1833	1786
1817	422	1834	3336
1818	247	1835	3770
1819	90	1836	1698
1820	124		

Year ending June 30.	Tons. (21 cwts.)	Value.	Price per Ton. Welsh.	Irish.	Cornish.
1837	2064	£13,384 16 6	£6 9 8	£6 8 0	£6 9 1
1838	2237	14,638 8 6	6 10 10	6 2 11	5 17 6
1839	2830	18,832 16 0	6 13 1	6 8 8	5 17 0
1840	1795	9,747 15 6	5 8 8	5 15 6	5 7 6
1841	1456	7,020 8 6	4 16 5	8 6 2	6 1 6
1842	556	2,728 19 6	4 18 1	8 4 8	6 1 6
1843	737	4,260 15 6	5 15 7	7 0 0	5 11 0
1844	1088	8,479 0 6	7 15 10	6 12 11	5 6 10
1845	681	3,175 14 0	4 13 3	6 2 1	5 6 3
1846	1389	6,639 13 6	4 15 7	6 7 7	5 11 7
1847	434	2,378 19 6	5 9 7	6 2 8	5 11 9
1848	68	570 17 0	8 8 0	5 7 2	5 6 0

It will be seen, from this comparison of the average prices of the copper ores of the three countries, that the Welsh may, on the whole, be considered the poorest; at the same time it must be remembered that, with regard to the Irish particularly, the carriage and freight to Swansea being, I apprehend, paid by the miner, have to be deducted before a fair comparison can be made; whereas, the Welsh being principally purchased by the smelter at the mouth of the mines, they are already allowed for in the price; but, where they are not, the expense of carriage cannot be so great as that of the Irish. The Cornish ores, in the same way, are bought with every allowance made to the smelter for their carriage to Swansea. When we take these circumstances into consideration, it is probable that the net profit upon the Welsh ores is not far below that of the other two countries.

The number of mines, of all descriptions, in Wales is estimated at 200. Of these, by far the greater proportion are coal mines, the cheapness of which for fuel has rendered that part of the United Kingdom the most desirable for smelting operations. A gold mine near Dolgelly, which was discovered by an eminent mining engineer some years ago, and who read a paper on the subject before the British Association at York, is likely to add much to the mineral importance of Wales. It has now been worked by its spirited proprietor for some time, who, I have been informed, has spent a considerable sum in proving its value; and, as facts speak for themselves, I may mention that I have had in my hand several valuable specimens, one of which was a bar of pure gold, nearly four inches long and half an inch in thickness, worth about 65*l.* There was also a considerable quantity of silver obtained from the same ore, large specimens of which I have also seen; and I believe that these two minerals are found in the copper ore raised from this mine.

It is estimated that there are in Scotland 150 mines of all descriptions; but these are principally collieries—there being very few lead, and no copper mines of any importance. The lead mines of Leadhills, in that country, are among the most productive of that mineral in the United Kingdom. One copper mine, known by the name of the Carwinning Hill, has lately been brought into operation. It is situated in Ayrshire. The ore yet discovered has been rich; but I am not aware that any great quantity has been sold. The ground is considered, by competent parties, to be well worthy of being further explored.

I have yet, Sir, only endeavoured to give an account of the produce of the ore, or raw material, in the United Kingdom. Before proceeding to make any observations on the smelting trade, and the exportations of the manufactured article, or metallic copper, I think it will be better to lay before you the importations of foreign and colonial copper and copper ore. The tables, which appear below, I have compiled with care, and with no little trouble, from the returns presented to Parliament.

I believe that in France there are no copper mines in operation; but that our importations from that country are principally our own copper returned. There is no doubt, however, that copper exists there. The following are the importations for the last 17 years:—

Imports of Copper and Copper Ore from France, *into the United Kingdom.*

Year ending Jan. 5.	Copper, unwrought, in bricks or pigs, rose copper and cast copper.	Part wr., viz., bars, rods, or ingots, hammer. or raised.	Plates and coins.	Old, for remanufacture.	Ore.	Copper Manufactures. Entered at weight.	Entered at Value.
	T. cwt. qr. lb.	*C. qr. lb.*	*C. qr. lb.*	*C. qr. lb.*	*T. cwt. qr. lb.*	*C. qr. lb.*	£ *s. d.*
1832	—	—	0 0 2	8 0 25	—	—	2258 0 6
1833	—	—	2 1 22	—	—	—	2883 18 6
1834	—	—	0 0 10	—	—	—	2345 2 10
1835	0 0 0 2	—	—	—	— 6 3 4	—	1555 0 6
1836	—	—	2 0 11	—	— 33 2 2	—	2287 16 0
1837	—	—	—	—	—	—	5914 16 4
1838	—	—	1 1 2	—	—	—	1601 13 0
1839	—	0 2 15	0 1 20	—	— 0 0 6	—	2543 19 0
1840	—	1 2 4	0 3 14	47 2 2	—	—	1897 14 0
1841	0 1 0 0	0 1 21	0 0 15	—	0 2 0 0	—	1780 3 6
1842	0 10 0 0	1 1 23	0 0 4	—	0 1 1 25	—	1451 0 6
1843	—	—	0 1 14	—	9 2 1 14	—	1936 6 6
1844	21 13 1 15	—	0 0 5	13 3 12	0 0 0 12	—	2788 4 10
1845	—	—	0 0 14	32 3 14	0 2 1 19	35 0 10	2348 18 11
1846	—	—	0 2 14	—	3 15 0 0	—	2394 19 2
1847	—	—	—	22 1 5	118 4 0 0	—	3059 2 7
1848	—	—	0 2 3	9 2 20	32 4 0 12	1 1 4	2841 10 0

The principal copper mines in Norway are the "Alten" and the "Roraas." The latter is believed to be very productive; but none of its produce comes to this country. It, as well as the Alten, yields about 120 tons of copper annually. The ore of Roraas averages 7 per cent., and is smelted by the proprietors at the mines. The Alten Mines are worked by a London company. Upwards of 200,000*l.* have been received by them for proceeds of sales of copper and ore since 1838—being upwards of 13,000*l.* a year. From 1837 to 1840 inclusive, the average returns were upwards of 20,000*l.* per annum. They had then a very rich course of ore at the mine, which is named by them the Raipas Mine—the produce being 30 to 40 per cent.; and, from present indications, they are sanguine of such another piece of good luck at the same mine. They occasionally meet with bunches of ore of the high produce referred to above. The company do not bring their ore to this country; but, since 1837, have smelted it in Norway. The cost per ton of ore is about $86\frac{1}{2}$; and the copper is exceedingly pure—being, by assay, about $99\frac{80}{100}$. The Alten Mines are situated in the northern part of Norway, about 70° north latitude.

Imports of Copper and Copper Ore from Norway, *into the United Kingdom.*

Year ending Jan. 5.	Copper, unwrought, in bricks or pigs, rose copper and cast copper.	Part wrought—viz., bars, rods, or ingots, hammered or raised.	Plates and coins.	Old, for remanufacture.	Ore.	Copper Manufactures. Entered by Value.
	T. cwt. qr. lb	*T. cwt. qr. lb.*	*T. cwt. q. lb.*	*C. qr. lb.*	*T. cwt. qr. lb.*	£ *s. d.*
1835	—	—	—	2 1 5	116 5 2 10	—
1836	—	—	—	—	507 11 0 13	—
1837	—	—	—	—	182 17 1 16	—
1838	—	—	—	—	—	—
1839	—	—	—	—	—	—
1840	—	—	—	4 2 17	—	—
1841	—	—	73 17 0 11	—	57 8 2 14	—
1842	—	—	—	38 1 25	—	—
1843	79 9 1 10	—	50 10 0 5	—	39 6 1 0	—
1844	—	45 14 3 22	23 12 1 2	—	5 10 1 20	—
1845	140 5 3 6	—	—	—	3 18 1 9	—
1846	69 9 2 13	—	—	—	4 7 2 21	—
1847	—	69 19 0 4	—	—	—	—
1848	32 17 3 27	—	—	0 2 19	0 0 1 0	334 10 0

Imports of Copper and Copper Ore from Sweden, *into the United Kingdom.*

Year ending Jan. 5.	Copper, unwrought, in bricks or pigs, rose copper & cast copper.	Part wrought —viz., bars, rods, or ingots, hammered or raised.	Old, for remanufacture.	Ore.	Copper Manufactures. Entered at Value.
	T. cwt. qr. lb.	*T. cwt. qr. lb.*	*T. cwt. qr. lb.*	*T. cwt. qr. lb.*	£ *s. d.*
1832	—	—	—	714 14 0 0	—
1833	—	0 0 1 17	—	366 6 0 22	10 0 0
1834	—	—	—	789 18 2 9	—
1834	—	—	—	635 0 3 16	—
1836	—	—	—	493 9 0 26	—
1837	11 14 2 11	—	—	1905 8 3 18	—
1838	—	—	1 16 2 3	1469 10 0 0	—
1839	45 7 3 21	—	—	718 15 2 11	—
1840	277 11 2 8	—	—	501 18 0 0	2 0 0
1841	161 18 1 14	—	—	23 10 0 0	—
1842	126 6 0 3	—	—	16 12 0 14	5 0 0
1843	55 11 2 21	—	0 6 1 8	—	—
1844	—	—	—	—	0 5 0
1845	—	—	—	—	—
1846	—	2 0 0 15	—	—	—
1847	—	—	—	—	—
1848	—	—	0 7 3 24	—	—

Fine specimens of carbonate of copper, or *malachite*, are found in Russia. It takes a fine polish, and is manufactured into ornaments. I understand that the Queen has a splendid vase of malachite, presented to her by the Czar.

Imports of Copper and Copper Ore from Russia, *into the United Kingdom.*

Year ending Jan. 5.	Copper, unwrought, in bricks or pigs, rose copper and cast copper.	Part wrought —viz., bars, rods, or ingots, hammered or raised.	Plates and coin.	Old, for remanufacture.	Ore.	Copper Manufactures. Entered by weight.	Entered by Value.
	T. cwt. qr. lb.	*T. cwt. qr. lb.*	*C. qr. lb.*	*C. qr. lb.*	*C. qr. lb.*	*T. cwt. qr. lb.*	£ *s. d.*
1832	—	—	—	0 3 12	—	—	—
1833	—	—	—	—	—	—	—
1834	5 1 2 9	—	—	5 0 0	0 0 18	—	—
1835	5 1 0 23	26 19 1 18	—	—	—	—	7 10 0
1836	9 1 2 4	16 1 1 14	—	—	—	—	41 15 0
1837	0 0 3 22	—	—	—	3 1 11	—	4 0 0
1838	—	—	—	0 3 20	—	—	5 0 0
1839	—	—	—	1 3 5	—	—	—
1840	—	—	—	8 0 23	—	—	—
1841	—	—	—	—	—	—	3 0 0
1842	—	—	—	—	—	—	22 0 0
1843	—	—	—	0 2 24	—	—	46 15 0
1844	3 4 1 8	—	0 0 1	28 0 7	—	0 17 0 16	2 17 6
1845	—	—	—	—	—	—	96 15 0
1846	—	—	25 2 14	—	—	1 12 2 16	62 10 0
1847	32 2 3 2	—	—	12 3 4	—	—	3 0 0
1848	—	—	—	1 0 0	—	—	14 15 0

Imports of Copper and Copper Ore from Holland *into the United Kingdom.*

Year ending Jan. 5.	Copper unwrought in bricks or pigs, rose copper, and cast copper.	Part wrought—bars, rods, or ingots, hammered or raised.	Plates and coins.	Old for remanufacture.	Ore.	Copper Manufactures. Entered by weight.	Entered by value.
	T. cwt. qr. lb.	*Ct. qr. lb.*	*C. qr. lb.*	*C. qr. lb.*	*T. cwt. qr. lb.*	*T. c. qr. lb.*	£ *s. d.*
1834	—	—	2 0 25	—	—	—	8 0 0
1835	—	—	—	2 0 1	43 18 0 20	4 5 2 25	1 10 0
1836	0 0 0 7	—	0 0 4	—	—	23 3 2 23	59 0 0
1837	0 17 3 16	1 3 12	—	0 3 21	57 8 0 0	9 2 0 16	72 1 6
1838	—	—	—	—	35 16 0 0	10 18 0 13	24 19 6
1839	—	—	0 0 7	—	38 0 0 0	—	59 5 0
1840	1 14 2 7	0 1 12	—	0 3 0	50 0 0 0	—	100 0 0
1841	—	—	—	—	40 6 0 0	0 1 0 20	65 3 0
1842	—	—	0 0 14	—	90 1 0 0	3 0 3 18	512 3 9
1843	—	—	—	—	13 5 2 0	23 17 2 5	288 6 0
1844	—	0 1 6	—	—	63 18 2 14	33 2 3 6	114 10 0
1845	—	1 2 23	0 2 0	—	89 16 3 25	15 8 0 15	296 5 0
1846	—	1 0 22	—	—	110 5 3 11	27 9 3 3	670 15 0
1847	—	—	—	13 2 9	2 12 3 3	32 12 0 10	1033 17 0
1848	—	1 0 18	—	—	76 10 0 0	14 10 0 3	221 1 0

There are a few copper mines in Germany. A London company, called the Kinzigthal Mining Association, possess some mines in that country, the produce of which are said to consist of copper and lead in large quantities. Ore brought over has been analysed, and found to produce 24·23 per cent. of copper. The property is situated in the Kinzig Valley, in the Black Forest of Baden and Württenberg; and it has long been an indisputable fact, that mineral wealth existed in that locality. Various attempts were from time to time made to develope its resources, but the unsettled state of that part of Europe necessarily circumscribed the spirit of enterprise; and, although the operations are said to have been for awhile attended with large profit, the scourge, or apprehension of war, coupled with the then precarious tenure of territorial possessions, prevented the outlay of capital necessary for the efficient carrying on of the works. It is presumed, that as long as Great Britain does not interfere in the continental disputes, the company will be allowed to prosecute its labours unmolested. In the following table the imports from Germany for the years 1845-46-47, are precluded in the returns for the Hanseatic Towns:—

Imports of Copper and Copper Ore from Germany *into the United Kingdom.*

Year ending Jan. 5.	Copper unwrought, in bricks or pigs, rose copper, and cast copper.	Part wrought—bars, rods, or ingots, hammered or raised.	Plates and Coin.	Old for remanufacture.	Ore.	Copper Manufactures. Entered by weight.	Entered by value.
	T. cwt. qr. lb.	*T. ct. q. lb.*	*T. c. q. lb.*	*T. c. q. lb.*	*T. c. q. lb.*	*T. c. q. lb.*	£. *s. d.*
1834	0 9 3 15	0 2 3 19	0 13 3 14	0 10 2 12	—	—	1518 4 0
1835	—	0 1 3 11	—	1 8 2 10	—	0 4 3 8	2161 10 4
1836	0 0 0 21	0 3 2 3	0 0 0 1	3 9 3 5	—	5 19 1 20	2903 19 6
1837	—	2 11 3 8	—	7 4 3 19	8 8 2 25	28 2 2 0	2061 5 2
1838	—	0 3 0 7	—	0 2 2 14	2 0 19	12 6 0 22	1211 13 4
1839	—	0 15 2 8	0 0 0 22	0 5 3 17	125 18 0 27	1 4 2 19	1366 8 2
1840	—	0 5 2 14	—	2 1 2 6	—	3 15 0 0	313 12 0
1841	—	—	0 0 1 25	0 19 0 20	—	10 17 1 7	327 2 6
1842	—	—	0 0 0 7	0 3 3 21	33 0 0 0	28 18 0 21	249 11 0
1843	—	0 0 2 23	—	—	—	12 14 3 20	557 7 6
1844	—	0 1 3 7	0 0 3 12	1 10 0 0	—	5 3 0 2	101 6 6
1845	—	0 6 2 23	1 14 3 8	4 12 3 8	—	6 6 1 16	204 0 0
1846	—	—	3 13 0 10	1 11 0 24	0 1 0 0	10 15 1 17	295 0 0
1847	—	1 0 0 18	0 17 2 7	—	—	11 14 2 21	402 4 0
1848	0 1 9 0	0 1 0 9	0 18 2 18	5 18 2 25	—	24 0 2 24	520 0 6

Imports of Copper and Copper Ore from Italy, *into the United Kingdom.*

Year ending Jan. 5.	Copper, unwrought, in bricks or pigs, rose copper, and cast copper.	Plates and coin.	Old, for remanufacture.	Ore	Copper Manufactures. Entered by weight.	Entered by Value.
	T. cwt. qr. lb.	*C. qr. lb.*	*T. cwt. qr. lb.*	*T. cwt. qr. lb.*	*T. cwt. qr. lb.*	£ *s. d.*
1832	—	0 0 2	—	—	—	7 0 0
1833	—	0 1 24	—	—	—	2 5 0
1834	—	—	—	—	—	6 5 0
1835	—	0 0 20	—	2 7 1 20	—	9 5 0
1836	—	—	0 2 3 14	—	1 2 0 6	1 5 0
1837	13 13 1 19	—	—	—	0 17 0 22	24 5 0
1838	41 1 0 23	—	—	16 11 2 2	0 4 1 9	13 0 0
1839	—	—	—	—	—	3 0 0
1840	4 15 3 20	0 1 7	—	30 19 0 12	—	13 18 0
1841	0 5 2 11	0 3 20	—	102 13 1 14	—	1 19 0
1842	—	0 2 16	—	245 10 0 24	—	28 3 0
1843	—	0 0 2	—	324 9 1 4	—	—
1844	0 0 2 14	0 1 0	—	365 17 8 24	2 14 0 17	159 0 0
1845	0 8 1 26	—	0 3 1 24	558 10 3 8	0 14 2 3	10 10 0
1846	—	0 1 5	—	640 11 2 14	1 19 0 1	58 12 6
1847	—	0 1 23	0 11 2 8	576 16 2 2	1 6 3 6	37 0 0
1848	—	2 11 3 16	207 2 3 3	0 10 1 13	130 0 0	

I have now given the importations from the principal countries of Europe separately, and the following table shows the total importations from the whole of Europe for the last 17 years. I may observe, that for the years, 1842-43-44, the importations from Syria and Egypt are included in those from Turkey, and are, therefore, added to the returns in this table for those years:—

Imports of Copper and Copper Ore from the whole of Europe *into the United Kingdom:*—

Copper unwrought, in bricks or pigs, rose copper, and cast copper.	Part wrought—bars, rods, or ingots, hammered or raised.	Plates and coin.	Old for remanufacture.	Ore.	Copper Manufactures. Entered by Weight.	Entered by Value.
T. c. qr. lb.	*T. c. qr. lb.*	*T. c. qr. lb.*	*T. c. qr. lb.*	*T. c. qr. lb.*	*T. c. qr. lb.*	£ *s. d.*
*23 16 0 25	0 1 3 11	0 0 1 11	1 14 0 5	714 14 0 4	—	2920 13 4
8 11 0 26	0 4 1 0	0 3 1 0	5 11 2 24	400 4 2 16	—	4589 16 10
11 8 0 6	0 2 3 19	0 16 0 22	2 6 3 23	880 18 2 6	—	3878 11 10
27 0 1 16	28 6 0 1	0 0 0 22	2 1 3 7	851 10 3 24	4 17 1 9	3739 14 10
17 15 0 23	16 4 3 17	0 2 0 16	5 10 1 13	1065 9 1 21	31 18 2 23	5326 2 0
334 17 2 18	4 15 1 7	0 0 0 1	7 5 3 12	2173 16 2 25	38 1 3 0	8081 0 0
177 2 3 14	0 3 0 7	0 1 1 4	3 12 2 9	1522 0 2 1	23 8 2 16	2889 11 4
55 7 3 21	0 16 0 23	0 0 3 13	1 12 1 13	882 13 3 21	1 8 2 3	4002 17 2
287 6 0 13	0 7 2 2	0 1 0 21	7 15 1 12	582 17 2 21	3 15 0 0	2336 3 6
162 4 3 25	0 0 1 21	74 0 1 26	2 8 2 3	226 11 1 3	10 18 1 27	2190 18 0
126 16 0 3	0 1 1 23	0 0 3 18	4 2 0 20	385 4 3 7	31 19 0 11	2274 17 6
141 8 3 2	0 0 2 23	50 10 2 12	0 16 3 11	394 18 3 8	36 12 1 25	2838 0 0
28 15 0 5	86 6 1 0	64 5 1 20	4 15 0 22	672 18 3 0	41 17 0 13	3217 1 4
140 14 1 4	0 8 1 18	1 15 2 4	6 10 3 11	674 5 1 20	35 18 3 1	2990 18 11
69 10 0 3	2 1 3 20	5 0 2 27	1 11 1 15	860 18 2 26	49 11 0 15	3634 17 8
44 9 0 1	70 19 0 22	0 18 0 2	3 11 0 8	715 17 2 16	49 2 1 2	4689 9 7
194 0 0 17	70 7 0 6	59 18 0 13	16 10 0 12	316 6 2 5	42 15 1 0	4222 11 6

* In this table the returns are also made up for the years 1832-48.

In these statements it has obviously not been my object to give any particulars of mining in Europe; such would be foreign to my subject, which is a detailed, and, as far as possible, an accurate account of the copper trade of other countries with Great Britain. I hope these endeavours may be useful. When I have gone through the importations of copper and copper ore from all the world, I shall then enter into the smelting department, and the exportations of metallic copper.—Plain Facts: *London, Nov.* 21.

IMPROVEMENTS in OBTAINING and APPLYING MOTIVE-POWER.

Sir,—On reading that portion of Mr. De la Haye's former letter, where he said—"My object was to *instantaneously* condense the steam after it had passed the cylinders of the locomotive engine," &c., I concluded that his impression was, that I intended the *fore end* of the tube should be in communication with the vacuum, which, being an important mistake, I considered it necessary to refer him to my first explanation. By merely removing the atmospheric pressure from the eduction side of the pistons of the locomotive engine, the power would only be increased about one-fourth; and with regard to *weight*, what advantages would it secure, or is the bite to be obtained independently of weight? Certainly there would be a slight reduction in fuel and water, but I doubt whether this alone would be worth the extra expense, even for a condensing engine; and although, by my invention, the mechanical effect of a given weight of steam will be more than double what is secured by the present locomotives, yet even this advantage, great as it is, would scarcely warrant the extra outlay, were it not that *more than half* of this power will be applied, *independently* of the "bite" of the driving-wheels, whereby, in addition to reducing the consumption of fuel and water more than one-half, the *weight* of the engine and tender will likewise be reduced in the same proportion. If this be taken at 20 tons, and the weight of the tube at 5 tons, the gain would be 15 tons, which might be added to the train; and taking the value of the additional profitable load at only 1*l.* per mile per day, it will give from 15 to 20 per cent. on the original outlay, including the cost and working of the stationary power, leaving all the economy in fuel and water, and wear and tear of rails, &c., to be deducted from the present expenses, with a host of other advantages, which would take a volume to enumerate.

Portland Town, Nov. 21. John Weston.

IMPROVEMENTS in OBTAINING and APPLYING MOTIVE-POWER.

Sir,—It appears that I was quite right in the opinion I expressed, regarding *one* of Mr. Weston's opponents—Mr. De la Haye; who, although he has not yet expressed an unqualified approbation of Mr. Weston's plan, yet sufficient may be gathered from what he has said, to consider him at least favourable; and it appears to me, that it is only for the want of more correct information on the *details*, that a further approval has not been awarded. My own opinion, as well as that of several individuals with whom I am acquainted, is that it would have been much better for Mr. Weston and his friends, if in the first instance a full, complete, and illustrated description of this part of his invention had been given; as there is no doubt, with all the explanations that have from time to time been elicited, there are many of your readers who are still considerably in the dark (I can answer for several) as to the real nature and merits of the invention; and, with all due respect to Mr. Weston, I beg to submit that

even *now* it would be to his advantage to furnish an *illustrated* description, and sum up, as briefly as he can in *one* letter, all the advantages which he considers will be secured by its adoption, and thus obviate the necessity, which at present exists, of looking over the entire correspondence before one can become acquainted with the supposed advantages. R. M.

Portman-square, Nov. 22.

CARBON AND IRON.

Sir,—The extraordinary opinions advanced in your last week's Number, and inserted under the head of the "Metallurgical Treatment of Ores," seem to call for a few observations. It is stated that malleable iron, exposed for a long time to a red heat, but out of contact with air, undergoes no change. Now, if we take a piece of the best and toughest Staffordshire bar-iron, whose fracture exhibits a mass of soft bluish fibre, without a particle of granulation, and expose it to a red heat for some hours out of contact with air, we shall obtain a result as brittle as cast-iron, whose fracture exhibits an assemblage of dazzling bright cubical crystals, which are the larger, and possess the less coherence, in proportion as the exposure is longer, and the temperature more elevated. This is a change, and a striking change, which may also be produced by cold hammering a piece of iron of the same quality. The same structure presents itself in the bars of fire-grates in contact with air; but a long exposure is, in this case, required. In the iron pins which connect the fastenings of common tram waggons, the transition, from a tough fibrous texture of a dull slaty colour to the most brilliant arrangement of cubical crystals, is, perhaps, the most singular and complete. In a pin of 1¼ inch diameter, I have seen crystals measuring more than one-eighth of an inch on their edges; yet this iron pin had been forged from tough Staffordshire rod-iron. The vibration to which these pins are subjected is excessive; and a few month's wear is often sufficient to effect this change in their structure. "Again (saith the authority) malleable iron fused, *per se*, keeps all its properties." This implies that it will work at any ordinary heat, and, of course, that it will weld as it would before fusion. Now, from the results of many hundred experiments which I have myself made upon this subject, I can affirm, that malleable iron thus fused, is, in every case, unfit for the smith, and that it can only be worked at certain temperatures without dissipating—whilst the welding property, except in the best foreign bar-iron, disappears altogether. Next comes the strange and paradoxical assertion, that white cast-iron contains a maximum dose of carbon, and that by diminishing the quantity of carbon below 4·25 per cent., the iron becomes granular and grey. There is also some dark allusion to graphite and *altered carbon*—compounds, by the way, of whose composition the most profound chemists are iguorant at the present day. Now, although chemists cannot give an analysis of graphite, which is confessedly in alloy with grey pig-iron, still they will pretend to assign the exact quantity of carbon in that very kind of pig-iron. In refutation of these crude ideas, respecting white and grey iron, I now cite a passage from my late father's writings on this subject, published a few years ago: —"I shall, for the present, furnish no further objection to the theories of Drs. Ure and Karsten; but conclude by stating the following facts as evidence against them. Quantities of grey cast-iron, white cast-iron, and high-blown metal, were reduced to powder, so as to pass a sieve, containing 900 holes in each square inch of its surface—my purpose being to form a species of metallic charcoal, to be used in the reduction of an ore of iron, confident that the iron which contained the greatest quantity of carbon would revive from the ore the greatest per centage of iron. A micaceous iron ore, containing 70 per cent. of iron, was used. With the powdered grey iron, 40 per cent. was, on an average, obtained from the ore, besides making good the weight of the original quantity of iron introduced into the crucible. With the powdered white cast-iron, no iron at all was revived from the ore; and, with the powdered high-blown metal, the original quantity of iron sustained a *loss* of from 4 to 8 per cent."

Subsequently to these experiments, I made, with the same kind of ore, the following trials in crucibles of Cornish clay of equal size, and accurately fitted with covers.

Experiment, No. I.	Grains.
Micaceous ore, yielding 70 per cent. of iron	1000
Charcoal, finely powdered, 25 per cent.	250
Result in soft malleable iron	704
Or, 70·4 per cent. from the ore.	
Experiment, No. II.	
Micaceous ore, as above	1000
Charcoal, 35 per cent.	350
Result in white cast-iron	721
Or, 72·1 per cent. from the ore.	
Experiment, No. III.	
Micaceous iron ore	1000
Charcoal, 45 per cent.	450
Result in rich grey iron	738
Or, 73·8 per cent. from the ore.	

The white cast-iron possessed all the characteristics of ordinary white iron, and was not acted upon by the file. The grey iron was rich and granular, with large crystals interspersed, and very soft and open in its grain. Now, how can the *later experimenters* explain away these undeniable facts? and how is it, that a greater yield is always obtained from any given sample of ore, when the iron is grey, than when it is white? Until chemists shall have ascertained the real conditions under which carbon exists in various qualities of cast-iron, they will make no advance in the science of iron smelting; and they can never ascertain these conditions correctly, until they shall have learnt to consider pig-iron as what it in reality is—viz.: an alloy, in endless variety of proportions of pure iron, malleable iron, steel, white cast-iron (the definite compound of iron and carbon), and grey cast-iron (the mechanical mixture of graphite with one or more, or all the preceding kinds).

The egregious errors into which Karsten has fallen, respecting the quantities of carbon in bar and cast-steel, appear to me to have arisen from his having operated upon steel produced from the manganesiferous ores of iron, and which contain a large alloy of the carburet of manganese. The affinity of manganese for carbon, at high temperatures, is as remarkable as its affinity for oxygen at lower degrees of heat, so that when alloyed with steel it is carburetted at the expense of the steel, and thus the steel itself is softened and reduced in quality, so as to become ductile and workable. The steels examined by Karsten were not true steels, but mere alloys of steel with carburet of manganese. Nothing can be easier to explain than why, with equal per centages of carbon, pig-iron may be either white or grey—brittle, or soft and granular. Thus an alloy of three parts of grey cast-iron, containing 4 per cent. of carbon, with one part of pure iron, will give lamellar white cast-iron, containing 3 per cent. of carbon; and an alloy of three parts of grey cast-iron, containing 3·5 per cent. of carbon, with one part of steel-grained iron, containing ·5 per cent. of carbon, will yield granular grey iron, containing, like the lamellar white cast-iron, 3 per cent. of carbon.

Whilst chemists are divided as to whether graphite is, or is not, a compound of iron and carbon, and whilst they are unable to assign its component ratios, I must consider it as quite out of their province to treat of iron, and its *metamorphic* conditions, with any pretensions to analytical accuracy. It is said, that steel contains only *altered carbon*. Now, I cannot pretend to say what *altered carbon* may be, nor have I ever seen this mysterious phrase elucidated; but I am confident that steel, when *perfect*, contains nothing but pure iron and pure gaseous carbon; and if by any process, or manipulation, this pure gaseous carbon shall become altered, either to graphite or to concrete carbon, or to carbonic acid, or to carbonic oxide, or if any portion of it be thus altered, the quality of that steel is deteriorated in one way or other. When blistered steel is fused, the vesicular cavities which have not burst are, of course, full of carbonic oxide gas; and at the high temperature preceding fusion the affinity of the oxygen, combined with the carbon in this gas, becomes stonger towards the iron than towards the carbon; hence the carbonic oxide, or some portion of it, is deoxidated, and free carbon is set at liberty, and the consequence is, that although the steel has acquired additional hardness and homogeneity by its fusion, it will not bear a welding heat. If a second fusion be made to pass upon the steel, the free carbon, during the cementing heat preceding fusion, probably combines with the iron to form graphite, and the steel becomes, in consequence, more intractable, and liable to dissipate under the hammer like cast-iron. All the imaginary difficulties respecting steel and steel-making would speedily vanish were this principle adopted—viz.: that perfect steel, either bar-steel or cast-steel, should contain only pure iron and gaseous carbon. Every other addition is a *defect*, and every other state of carbon is, more or less, injurious to the quality of the steel. The want of a strict adherence to this principle has led multitudes of enterprising and talented men to waste their means and their energies in a fruitless research after some imaginary quality, possessed by peculiar ores of iron, and to attribute the excellence of certain irons, for steel-making, to the nature of the ores, from whence they were produced, or to the peculiarity of the manipulations to which they were subjected —the true explanation being, that in certain situations the materials possess naturally that arrangement, which the most readily affords, by the simplest and most inartificial treatment, bar-iron containing little else than pure iron and gaseous carbon. Some enterprises have failed, or have been more or less marred, wherein the finest and purest materials were used; because, though these materials were in themselves unexceptionable, they were treated so as to produce from them bar-iron and steel, with various modifications of alloyed carbon, inimical to the formation of a perfect quality of steel, and from a want of adhering to the all-important requisite of securing the presence of the carbon in the gaseous state, and in that state *alone* the most unexpected and disheartening failures have, from time to time, taken place in steel enterprises. The process of cementation of steel iron secures the presence of the largest proportion of gaseous carbon; and provided the bar-iron cemented has not previously contained carbon, either free or combined, in any other state, the steel of cementation will be *good*, and it will be *perfect*, if nothing but iron and gaseous carbon enters into its composition. The Swedish (L) iron comes the nearest to absolute purity, but as it contains a small alloy of manganese, it is therein defective. By gaseous carbon, I do not mean either carbonic acid or oxide, nor yet the theoretical vapour of carbon, but simply carbon in its natural state, which, by crystallisation, constitutes the diamond.

Coleford, Nov. 20. Robert Mushet.

CLARKE AND VARLEY'S PILE-DRIVING MACHINES.

Sir,—In answer to a letter in your valuable Journal of the 18th inst., from "A Contractor" (Nottingham), I beg to state that all the piles are driven for the dam at Irongate Wharf, and our steam-engine is now employed in pumping the water from the dam for building the foundation-wall. I am sorry your correspondent did not inquire at the wharf as to the success of our pile driver; but, perhaps, the testimonials of Mr. Harrison (the contractor for the works) and Mr. Crate (clerk of the works for the Sr. Katharine's Dock Company) will show clearly its complete success, and its great superiority over all other pile-engines for such works. Mr. Harrison states—

"In answer to your request, requiring my opinion of the efficiency of Clarke and Varley's atmospheric pile-driving engine, used by me at the coffer-dam for Irongate, St. Katharine's Dock, I beg to say that it has performed its work well, through very hard ground, to my entire satisfaction.—William Harrison: *Millbank, Westminster.*"

In a letter to me, Mr. Crate states—

"Having had extensive practice in driving coffer-dam and foundation piling, and finding your pile-driving machine on the works, I was determined to try its merits, by taking it in hand myself; in doing so I drove 42 piles 18 feet deep, in a bed of hard gravel, at the rate of three piles each tide, of about three-and-a-half hours; to drive one of these piles the hand-engine was five tides, and then left the pile two feet above the height required to be driven. My opinion is, that your pile-machine is of great practical value. —W. Crate: *Irongate Wharf.*"

We had great difficulty at first in getting our machine introduced on the works, and considerable time was wasted in arranging who should provide the machinery, which at last our proprietors had to provide, as well as the pile-driver. In the meantime, Mr. Harrison had the necessary plant of common hand-engines; but we proved that one of our machines would do more work than his eight engines by hand—showing that our engine is much cheaper in first cost than the common machines; also when a number of machines are employed, they have to be frequently removed out of each other's way—thus consuming much time and labour; while in our machine there is only one moving for each row of piles. In our double pile-engine we can drive two rows of piles with one moving of the machine—thus reducing the amount of dead weight to be moved to a minimum. A model of this machine may be inspected at your office; and a description of it, which is particularly applicable to forming coffer dams, railways on piles, and sea embankments, we shall be happy to forward for insertion in your next number.

The advantages to be derived from its application will be of great importance to contractors—1. From the greater stability of the works, as we can drive piles a considerable distance, after the common pile engine had driven them as far as possible.—2. Economy of timber; as by the common machine most of the piles are more or less injured, and many of them were broken in driving, had to be withdrawn, and new ones substituted, thus delaying the works for a considerable time; but with our machine not one of the piles were broken in driving, or had to be withdrawn, and the timber was not in the least injured. The short heavy blows not appearing to affect the timber more than about ⅛th of an inch on the head of the pile.—3. A great saving is effected in stages for the support of the machines. In ours one stage is necessary for its support; while with the common engine eight or ten are required for the same amount of work in a given time. The steam-engine erected for working the pile engine will be found valuable for other purposes—such as pumping water from the *dam*, or *foundations*, grinding mortar, working the cranes for hoisting the materials, sawing timber, excavating, &c.; and I should make arrangements in fixing the steam-engine, that the power might be applied to such works after the piles were driven, and which will more than repay for fixing the steam-engine, independent of the pile driving. In conclusion, our machine is applicable to every description of pile driving; it is as portable as the common hand engine, and may be moved about with the same facility, and is not liable to get out of repair. Cheap in first cost, and durable in working, it will effect a saving of full 50 per cent. in driving, and in at least one-sixth of the time.—Thomas Clarke, *Cambridge-terrace, Hackney, Nov.* 22.

RIDER'S RAILWAY BRIDGE.

Respected Friend,—I am somewhat at a loss how to account for S. Moulton's declaration, that Rider's railway bridge is not only "not somewhat like Smart's railway bridge," but entirely different; whereas it is not only like it in appearance, but *on exactly the same principle*; and the only difference is in arrangement, and in which I consider it is inferior. The principal difference is, that the road-way is constructed to ward the upper part of the trellis work, instead of the bottom part, which I shall take an early opportunity of explaining. So nearly is the external resemblance of the railway bridge of Smart's to Rider's, it would be pronounced by most persons that the latter is a copy—to prove which, I intend to give your readers an opportunity of judging for themselves, by getting permission of M. Smart to allow his model to be at your office for inspection, which model was submitted to R. Stephenson about 10 years ago. Your readers may, at the same time, inspect a model of mine for a bridge of 100 ft. span, proposed to be constructed with boiler-plates.

London, 11 mo., 23. Thomas Motley.

THE COPPER COINAGE—WHAT IS THE VALUE OF A PENNY?

Sir,—Will some of your correspondents furnish your columns with a statistical statement for a few years past, of what has been, and is, the real or metallic value, and the current or coinage value, of the copper circulating medium of the United Kingdom. Attention should be given to the loss of metal from the circulating friction, and other causes, since a penny, *as thin as a farthing*, still passes current among us at its original Mint value.—J. M.: *Battersea, Nov.* 24.

INSTANTANEOUS ILLUMINATION OF STREETS.

Sir,—Amid the myriad applications of electricity to the economy of life, it is passing strange that our metropolitan gas lamps, and those of our provincial towns, should not be lighted simultaneously by links of platinum, intercepting each gas-light along the chain of continuity—a common stop-cock uniting all, and one gigantic galvanic battery transmitting its energies in a moment of time over the length and breadth of the "great metropolis." This is by no means now advanced as a novel suggestion, or recommendation, as I have constantly recommended it during these twenty years past, and it has been repeatedly carried into practical effect, on a scale more or less limited in extent. J. Murray.

Portland-place, Hull, Nov. 20.

EARTHENWARE PIPING.

Sir,—In your Journal of the 11th inst. is a letter from your respected correspondent, Dr. Murray, on earthenware piping for the conveyance of water. I shall feel greatly obliged by Dr. Murray stating whether the pipes used by him are simply manufactured with clay, without being *glazed*; and, if *glazed*, what he considers to be the benefit arising from such a process.—S. G.: *Cardiff, Nov.* 17.

Falkirk Iron-Works.—As we predicted, in noticing last month the extensive and seemingly well-organised strike which took place amongst the moulders engaged at this establishment, the men have at length given in, and have returned to their work, to the number of about 400, upon the terms dictated by their employers.—*Falkirk Herald.*

THE ELECTRIC TELEGRAPH IN AMERICA.

A correspondent, writing from New York, under date Nov. 8, says:—"Many of the lines of electric telegraphs in the United States are returning good dividends to their shareholders. This is the natural result of wisely considered and liberal fares, good management, and great working rapidity of the several systems of telegraphs in use. The whole business of these companies contrasts remarkably with the miserable system pursued with the telegraphs in England, where the real practical results of electric communication, as compared with those arrived at in the United States, are scarcely known beyond hearsay. Here the telegraph is used by everybody, and for the ordinary business of the day—in England nobody ever dreams of resorting to it unless in extreme emergency. As a proof of the money earning results of telegraphs in this country, I may mention that the electric line between Louisville and Pittsburg divides 3 per cent. among the stockholders for the last three months, notwithstanding the fact that during that time $50,000 have been expended in putting up a second wire between Pittsburg and Cincinnatti. The expenses during the year have been unusually heavy, as must always be the case in the undertaking of new enterprises, and the costs of putting up enormously high masts for the extension of the wire across the Ohio river, and replacing the wire on the poles a few months since was very great, and yet *the dividends for the year amount to* 12 *per cent.* The regular dividends hereafter cannot be less than 15 per cent, per annum, and many are sanguine enough to reckon on a division of fully 20 per cent. How different this is from the results in England, where scarcely any one line of telegraph can in truth be said to pay its actual working expenses and maintenance, even with a country 50 times more thickly peopled, and with tenfold greater necessities for the use of such a means of communication. It is plainly to be seen that the old country must take a leaf out of Jonathan's book in this matter, and the sooner the electric telegraph in England is made efficient and available to the public, the better for all parties. The Buffalo Telegraph Company, on Saturday last, declared a dividend of 5 per cent. for the half-year, and *resolved to keep the Sabbath-day as one of rest*; and it is in America ordered that editors are to have the use of the lines free of charge from Tuesday evening to Wednesday evening, to receive and forward election returns. The line cost $100,000, and as half the profits of every line goes to Mr. Morse and three of his associates, proprietors of the patent, the inventor receives $2500 a year from this one line."

IMPROVEMENTS IN ELECTRIC TELEGRAPHS AND APPARATUS.

[Messrs. Barlow and Foster's patent, dated April 27: specification enrolled October 27.]

The improvements specified under this patent consist, firstly, in coating, and thereby protecting and insulating the wires of telegraphs, with gutta percha, or a compound thereof. To coat such wires with gutta percha is, of course, not new, but to coat them with the particular compound specified may possibly be so. The compound consists of one part by weight of New Zealand gum, and one part of milk of sulphur, added to eight parts of gutta percha, by little and little, while in a kneading trough, and at a temperature of 120 Fahr. The coating is effected as follows:—Two pairs of rollers are made to revolve, by means of suitable gearing, at one uniform speed, and each pair is provided with a pipe fitted steam-tight to one end of their axis, through which pipe steam is admitted at pleasure, which serves to bring the rollers to a temperature sufficient to soften partially two bands of gutta percha passed between them. Then, there is another pair of rollers which have their surfaces cut with semicircular grooves; the grooves of the one roller corresponding, or falling right over those of the other. The wires to be covered are wound upon reels, from which they pass between the second pair of rollers. The bands or fillets of gutta percha are passed between the first pair of rollers (and are so brought into an adhesive state), and the two bands of gutta percha, with the wires between them, are in this state passed between the second pair of rollers, by which the fillets of gutta percha are made to adhere together, and consequently to envelop the wires.

Secondly,—The patentees propose so to govern the currents of electricity, as to cause the pulsations to indicate different signs and symbols. The pulsation of one current of electricity is made to move forward the axle or other recipient of motion to a certain distance, representing five units; and that of the other current a distance in the reverse direction, representing four units; and the conjoined pulsations of the two currents, a distance represented by one unit. Thus, supposing A and B to represent the two currents, the sign will be indicated by—

1st. 1 pulsation of A
2d. by 1 pulsation of A and B,
3d. by 1 pulsation of B,

and so on. The mechanical arrangements by which this is effected could not be rendered intelligible without engravings.

Thirdly,—The patentees describe an electric telegraph apparatus for indicating the passing and time of passing of a railway train. A dial is pierced with 60 holes at regular distances, in which holes small plugs are placed. This dial is made to revolve once every hour. A metal spring presses against the face of the dial, and has the effect of thrusting back any plug that may have been protruded. Above the dial is an electro-maguet, which attracts, on the passing of an electric current from the station which the train has just passed, one end of a lever, the other end of which protrudes the plug immediately underneath it beyond the face of the dial, so that the attendant is enabled, by looking at the dial, to see whether the train has passed the station, and what time has elapsed since it passed. The claims are—

1. The "modes" of coating and insulating the wires of electric telegraphs with gutta percha or its compound.
2. The governing the currents of electricity so as to cause each pulsation thereof, separately or conjoined, to indicate different signs or symbols.
3. The apparatus for indicating the passing and time of passing of railway trains.—*Mechanics' Magazine.*

Liquid for Cleaning Metals.—One of the first operations in finishing metallic work after it comes from the casting, or from the hammer, is to free it from the coat of oxide which adheres to it—this is done generally by keeping it for some time in water, strongly acidulated with sulphuric or muriatic acid. But an inconvenience in this process arises from the fact that the metal is liable to be attacked on its lines and angles, and wherever it presents a point or edge. Hence arises a double loss, both of the acid employed, and of the metal. MM. Thomas and Dellisse, state that they have succeeded in avoiding these inconveniences, by combining with the acid of the bath certain organic matters which have the property of preventing, or at least of considerably diminishing, the influence on the metal of the acids. According to them, glycerine, artificial tannin, napthaline, and creosote, attain this end. In the baths thus composed, the scale of oxide detaches itself without dissolving, and without the metal being attacked, so that the pieces may remain in the bath, as long as may be desired without alteration. These facts announced by MM. Thomas and Dellisse are corroborated by the experiments of M. Flachat, chief engineer of the Versailles and St. Germain Railroad. M. Mertian, proprietor and director of the forges of Montataire, and M. S. Falatieu, forge-master at Bains, testify that they have tried this process upon sheet iron, and have adopted it to the exclusion of all others. The economy of this process, compared with the former ones, is about two-thirds of the acid employed, and 50 per cent. of the loss of metal in cleaning.—*Bull. Soc. Enc. Indus. Nat.*

The Iron Trade in America.—The following facts are abridged from a recent pamphlet on the coal and iron trade of Pennsylvania. The domestic products of the United States in 1810, in a report prepared for Congress, were enumerated at 53,908 tons of pig-iron, from 153 furnaces; 24,541 tons of bar iron, from 330 forges; 15,727,914 lbs. of nails (partly out of imported iron), from 410 nailories; and 6500 tons of iron were required at 316 trip-hammers and 34 rolling and slitting mills; the value estimated at $14,364,526. In 1827-8, it was given in evidence before a committee of Congress, that Pennsylvania had made during the past year, 21,800 tons of bars, and 47,075 tons of cast-iron; that 3000 tons of bars more were made near Lake Champlain; that three counties in New Jersey had made 2050 tons; and that in a circle of 30 miles diameter in New York there were 110 forge fires, each of them able to produce 25 to 35 tons yearly. The tariff was remodelled in 1828, and the duties raised. In 1830, a committee reported to Congress, that in that year were produced 112,866 tons of bars, and 191,537 tons of pig-iron, worth $13,327,760, and employing 29,254 men, who received $8,776,420 wages. The number of workmen is probably overstated, as in 1840, with improved machinery, only 30,497 men produced 484,186 tons. In 1839-40, the value of iron produced in the United States was reckoned at $22,778,635, of which sum $15,585,730 were for labour, including mining, transportation, coaling, hauling, &c. In 1845, the product of the Union was estimated thus: 540 blast furnaces, yielding 486,000 tons of pig-iron, 954 bloomeries, forges, rolling mills, &c., yielding 291,600 tons of bar, hoop, sheet, boiler, and other wrought iron; 30,000 tons of blooms, and 121,500 tons of castings; value of the whole, $42,000,000. In 1846-7, by the Treasury report, the Union exported of *domestic* manufactures 3,197,135 lbs. of nails, of which Cuba took 2,317,550 lbs. Also other articles of iron and steel to the value of $998,667, of which $478,681 to Cuba, and $162,020 to British North America. Some idea of the extent of the iron trade inland may be formed from the quantities carried on the canals. In 1847, there came to the Hudson, on the New York Canals, 21,608,000 lbs. pig-iron, 26,348,000 blooms and bars; of iron-ware, 3,014,000 lbs.—340 tons of iron and iron-ware were cleared on the canals at Buffalo and Oswego; 7716 tons pig-iron reached Buffalo *via* Lake Erie, also 1256 kegs of nails; 15,000,000 lbs. of iron and nails arrived at Cleveland *via* the Ohio Canal, and 4085 tons of iron, 12,537 kegs of nails, were shipped from Cleveland coastwise. At Portsmouth, and three other towns on the western rivers, were shipped 5713 tons of iron, and between five and six millions pounds of nails.—Correspondent of *Birmingham Journal.*

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Mr. Johnson, engineer of the *Prometheus* steam-vessel, has suggested a very simple means of extinguishing fires on board ships or war-steamers—namely, by having one of Kingston's valves inserted in the bottom of the vessel with a connecting-rod or key, in the captain's cabin, or other convenient place under his entire control. By that means, on an alarm of fire been given, the captain could admit a sufficient quantity of water to extinguish the fire, without having to remove the cargo or stores, and save the bottom of the vessel from being charred. Mr. Kingston's valves are used in her Majesty's steamers for supplying water to boilers, and are opened and shut with the slightest pressure.

GOVERNMENT AND RAILWAY STEAMERS.—A trial of speed has lately taken place between the steam-packets run by the Government, for the conveyance of the mails between Holyhead and Kingstown, and those employed for the passenger transit of the railway company. From an official return of the performances of the respective vessels, in their passages between Holyhead and Kingstown, for three months, ending October last, it appears that the Government steamers have been beaten by the railway steamers, in similar seas and circumstances, on an average of 22 minutes and 33 seconds in each trip. The average run of the *Caradoc* Government steamer, from Holyhead to Kingstown, has been 4 hours 29 seconds, and of the *St. Colombo*, Government steamer, 4 hours 32 seconds. The average run of the railway company's steamers has been, of the *Anglia*, 3 hours 56 minutes, and of the *Scotia*, 3 hours 58 minutes.

ADMIRALTY RAILWAYS.—It has been determined by the Admiralty to introduce a system of railways, or tramways, in the different dockyards of the kingdom, for the transmission of timber and Admiralty stores to the water's edge, and to one part or other of the neighbourhood. The suggestion is understood to emanate from Mr. Ward, M.P., the secretary to the Admiralty. By the adoption of this plan, it is expected that a considerable saving will be effected in the navy estimates, particularly in the item of "teams." For this purpose, an outlay of 6661*l.*, will be required during the present year at the various dockyards.

LAW OF RAILWAY AMALGAMATION.—The law, as it at present stands, and as laid down for observance by the orders of both Houses of Parliament, on the subject of railway amalgamations, is as follows:—Parliament requires that in every railway bill, containing powers of purchase, sale, lease, or amalgamation, a special clause shall be inserted, prohibiting any company from exercising such powers, until they shall have proved to the satisfaction of the Railway Commissioners and of Parliament, that they have respectively paid up one-half of the capital authorised by their acts, by means of shares, and expended for the purposes of their acts a sum equal thereto. It is also provided that, on any measure for the amalgamation of railway companies, in any future session, the amount of capital created by such amalgamation should in no case exceed the sum of the capitals of the companies so amalgamated. Evidence of the facts necessary to be proved prior to permission to amalgamate, must be adduced before the Railway Commissioners, and upon such evidence they have granted certificates in each of the following cases:—Bristol and Exeter (Glastonbury Navigation), London and South-Western and Southampton and Dorchester Amalgamation; Aberdare (lease of Taff Vale), York, Newcastle and Berwick, and Great North of England Amalgamation; London and South-Western, Exeter and Crediton, and Taw Vale Amalgamation; Dundee and Perth, and Dundee and Arbroath; Caledonian and Wishaw and Coltness; Caledonian and Scottish Central. The law, though it applies of course, had not, when it was originally framed, in contemplation such gigantic fusions as the amalgamation of the London and North-Western, Great Western, and South-Western Companies; and, we understand, that in the ensuing session the entire question will be reconsidered in all its bearings.

RAILWAY LAW FOR THE CONVEYANCE OF TROOPS.—This subject has recently, at the instance of the Board of Ordnance, and the authorities of the War-office, received the consideration of the law officers of the Crown, who have adjudicated on several cases. In one of these cases an officer proceeding on duty by route, unaccompanied by troops, was refused conveyance by one of the express trains on the London and South-Western Railway at the rate of 2d. per mile, on the ground that the company were bound only to provide such conveyance by the ordinary trains; and upon the question being referred to the Attorney and Solicitor-General, they have given it as their opinion that railway companies are bound to provide conveyance for troops at the fares and upon the conditions mentioned in the statute by all trains starting at times fixed by the company's time tables. According to this, the obligation to provide conveyance by the express trains extends to the conveyance of troops generally, including private soldiers as well as officers. Since, however, the accommodation by express trains is limited, the military authorities do not think it expedient to enforce this right, unless in the case of officers proceeding on duty, unaccompanied by troops. The charge for the conveyance of soldiers is at the rate of 1d. per mile per man. The company, when called on to convey troops under an official order would be entitled to charge the *maximum* fare of 1d. per mile, although it might be higher than the rate charged by them to some class of ordinary passengers.

RAILWAY DEPRECIATION.—In a recent circular, Messrs. Railton, sharebrokers, Manchester, estimate the depreciation of railway stock, about the middle of last month, at "upwards of 120,000,000*l.*—that is, nearly one-sixth of the National Debt!"—*Railway Record.*

PREVENTION OF RAILWAY ACCIDENTS—THE ELECTRIC TELEGRAPH.—In a lecture, delivered last week, at Manchester, by Mr. Cox, the superintendent of the Electric Telegraph Company's works there, a very good suggestion was thrown out by that gentleman—that the guard of every train should be provided with a portable telegraph, which, in case of any accident or emergency, he could attach to any of the wires, and signal any station for assistance.—*Ibid.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Chester Main 15—Davison's West Hartley 15—East Adair's Main 13 6—Hasting's Hartley 15—Holywell Main 15 6—Ravensworth's West Hartley 14 6—Townley 14—Wylam 14 3—West Wylam 14 6—Cowpen Hartley 15—Hartley 14 3—Howard's West Hartley Netherton 15—Sidney's Hartley 15—Wall's End Brown's 14—Hilda 15—Hedworth 14—South Killingworth 14—Belmont 17 6—Bell 17—Hetton 19—Haswell 19 3—Keepier 18—Stewart's 19—Benson 16 6—Hudson's Hartlepool 16 6—North Hartlepool 15 6—West Hetton 16 6—Denison 16 6—Framwellgate 16—Ships at market, 274; sold, 47.

WEDNESDAY.—Buddle's West Hartley 15—Carr's Hartley 15—East Adair's Main 13 6—Hasting's Hartley 15—Holywell Main 15—Ord's Redheugh 12 9—Wall's End South Killingworth 13 9—Hetton 19—Haswell 19 3—Stewart's 19—Benson 16—North Hartlepool 15 6—West Hetton 16 3—Denison 16 6—Seymour Tees 16 6—Tees 18—Cowpen Hartley 15—Hartley 14 3—Howard's West Hartley Netherton 15.—Ships, 244; sold, 36

FRIDAY.—East Adair's Main 13—Hasting's Hartley 15—Holywell Main 15—Ord's Redheugh 13—Townley 13 9—Wylam 14 3—West Hartley 15 6—Wall's End Bewicke and Co. 15 6—Gosforth 15—Hedley 15—Hilda 14 6—Hedworth 13 6—Riddell's 14 6—Braddyll's Hetton 17 3—Hetton 18—Lambton 17 6—Russell's Hetton 17 6—Stewart's 18—Benson 16 6—Hudson's Hartlepool 15 9—South Hartlepool 16 3—Thornley 16 6—West Hetton 16—Adelaide Tees 17—Cowpen Hartley 15—Hartley 14 3—Howard's West Hartley Netherton 15.—Ships at market, 216; sold, 61.

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